

AI012-seq1ist-NationalEntry.txt
SEQUENCE LISTING

<110> National Institute of Advanced Industrial Science and Technology,
Masato MIYAKE, Tomohiro YOSHIKAWA, Jun MIYAKE

<120> Event Sequencer

<130> AI012PCT

<150> JP 2004-24923

<151> 2004-01-30

<160> 46

<170> PatentIn version 3.1

<210> 1

<211> 1929

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(1929)

<223> fibronectin 1

<400> 1

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Lys Pro Gly Cys Tyr Asp Asn Gly Lys His Tyr Gln Ile Asn Gln Gln	
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Trp Glu Arg Thr Tyr Leu Gly Asn Ala Leu Val Cys Thr Cys Tyr Gly	
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Gly Ser Arg Gly Phe Asn Cys Glu Ser Lys Pro Glu Ala Glu Glu Thr	
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Cys Phe Asp Lys Tyr Thr Gly Asn Thr Tyr Arg Val Gly Asp Thr Tyr	
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Gly Arg Gly Arg Ile Ser Cys Thr Ile Ala Asn Arg Cys His Glu Gly	
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Gln	Cys	Ile	Cys	Thr	Gly	Asn	Gly	Arg	Gly	Glu	Trp	Lys	Cys	Glu	Arg	
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385				390				395				400				
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aag Lys 625	tac Tyr	att Ile	ctc Leu	agg Arg	tgg Trp 630	aga Arg	cct Pro	gtg Val	agt Ser	atc Ile 635	cca Pro	ccc Pro	aga Arg	aac Asn	ctt Leu 640	1920
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 <212> PRT
 <213> Homo sapiens

<400> 2

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 35 40 45

Lys Pro Gly Cys Tyr Asp Asn Gly Lys His Tyr Gln Ile Asn Gln Gln
 50 55 60

Trp Glu Arg Thr Tyr Leu Gly Asn Ala Leu Val Cys Thr Cys Tyr Gly
 65 70 75 80

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 85 90 95

Cys Phe Asp Lys Tyr Thr Gly Asn Thr Tyr Arg Val Gly Asp Thr Tyr
 100 105 110

Glu Arg Pro Lys Asp Ser Met Ile Trp Asp Cys Thr Cys Ile Gly Ala
 115 120 125

Gly Arg Gly Arg Ile Ser Cys Thr Ile Ala Asn Arg Cys His Glu Gly
 130 135 140

Gly Gln Ser Tyr Lys Ile Gly Asp Thr Trp Arg Arg Pro His Glu Thr
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Gly Gly Tyr Met Leu Glu Cys Val Cys Leu Gly Asn Gly Lys Gly Glu
 165 170 175

Trp Thr Cys Lys Pro Ile Ala Glu Lys Cys Phe Asp His Ala Ala Gly
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Thr Ser Tyr Val Val Gly Glu Thr Trp Glu Lys Pro Tyr Gln Gly Trp
 195 200 205

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Met Met Val Asp Cys Thr Cys Leu Gly Glu Gly Ser Gly Arg Ile Thr
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Cys Thr Ser Arg Asn Arg Cys Asn Asp Gln Asp Thr Arg Thr Ser Tyr
225 230 235 240

Arg Ile Gly Asp Thr Trp Ser Lys Lys Asp Asn Arg Gly Asn Leu Leu
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Gln Cys Ile Cys Thr Gly Asn Gly Arg Gly Glu Trp Lys Cys Glu Arg
260 265 270

His Thr Ser Val Gln Thr Thr Ser Ser Gly Ser Gly Pro Phe Thr Asp
275 280 285

Val Arg Ala Ala Val Tyr Gln Pro Gln Pro His Pro Gln Pro Pro Pro
290 295 300

Tyr Gly His Cys Val Thr Asp Ser Gly Val Val Tyr Ser Val Gly Met
305 310 315 320

Gln Trp Leu Lys Thr Gln Gly Asn Lys Gln Met Leu Cys Thr Cys Leu
325 330 335

Gly Asn Gly Val Ser Cys Gln Glu Thr Ala Val Thr Gln Thr Tyr Gly
340 345 350

Gly Asn Ser Asn Gly Glu Pro Cys Val Leu Pro Phe Thr Tyr Asn Gly
355 360 365

Arg Thr Asp Ser Thr Thr Ser Asn Tyr Glu Gln Asp Gln Lys Tyr Ser
370 375 380

Phe Cys Thr Asp His Thr Val Leu Val Gln Thr Arg Gly Gly Asn Ser
385 390 395 400

Asn Gly Ala Leu Cys His Phe Pro Phe Leu Tyr Asn Asn His Asn Tyr
405 410 415

Thr Asp Cys Thr Ser Glu Gly Arg Arg Asp Asn Met Lys Trp Cys Gly
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Thr Thr Gln Asn Tyr Asp Ala Asp Gln Lys Phe Gly Phe Cys Pro Met
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Ala Ala His Glu Glu Ile Cys Thr Thr Asn Glu Gly Val Met Tyr Arg
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Ile Gly Asp Gln Trp Asp Lys Gln His Asp Met Gly His Met Met Arg
465 470 475 480

Cys Thr Cys Val Gly Asn Gly Arg Gly Glu Trp Thr Cys Ile Ala Tyr
485 490 495

Ser Gln Leu Arg Asp Gln Cys Ile Val Asp Asp Ile Thr Tyr Asn Val
500 505 510

Asn Asp Thr Phe His Lys Arg His Glu Glu Gly His Met Leu Asn Cys
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Thr Cys Phe Gly Gln Gly Arg Gly Arg Trp Lys Cys Asp Pro Val Asp
530 535 540

Gln Cys Gln Asp Ser Glu Thr Gly Thr Phe Tyr Gln Ile Gly Asp Ser
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Trp Glu Lys Tyr Val His Gly Val Arg Tyr Gln Cys Tyr Cys Tyr Gly
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Arg Gly Ile Gly Glu Trp His Cys Gln Pro Leu Gln Thr Tyr Pro Ser
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Ser Ser Gly Pro Val Glu Val Phe Ile Thr Glu Thr Pro Ser Gln Pro
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Asn Ser His Pro Ile Gln Trp Asn Ala Pro Gln Pro Ser His Ile Ser
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<213> Mus musculus

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<222> (1)..(1437)
<223> vitronectin

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agc Ser	tgc Cys 50	tgt Cys	gcc Ala	gac Asp	tac Tyr	atg Met 55	gag Glu	cag Gln	tgc Cys	aag Lys	ccc Pro 60	caa Gln	gta Val	acg Thr	cgg Arg		192
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gtg Val	gag Glu	gag Glu	ccc Pro	aag Lys 85	aac Asn	aat Asn	acc Thr	aac Asn	acc Thr 90	ggt Gly	gtg Val	caa Gln	ccc Pro	gag Glu 95	aac Asn		288
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cag Gln 225	tac Tyr	tgg Trp	cgc Arg	ttt Phe	gag Glu 230	gat Asp	ggg Gly	gtc Val	ctg Leu	gac Asp 235	cct Pro	ggt Gly	tat Tyr	ccc Pro	cga Arg 240		720
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 <212> PRT
 <213> Mus musculus

<400> 4

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Met Ala Ser Lys Lys Cys Gln Cys Asp Glu Leu Cys Thr Tyr Tyr Gln
35 40 45

Ser Cys Cys Ala Asp Tyr Met Glu Gln Cys Lys Pro Gln Val Thr Arg
50 55 60

Gly Asp Val Phe Thr Met Pro Glu Asp Asp Tyr Trp Ser Tyr Asp Tyr
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85 90 95

Thr Ser Pro Pro Gly Asp Leu Asn Pro Arg Thr Asp Gly Thr Leu Lys
100 105 110

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Lys Val Glu Gln Gln Glu Glu Ile Leu Arg Pro Asp Thr Thr Asp Gln
130 135 140

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145 150 155 160

Asp Ala Phe Thr Asp Leu Lys Asn Gly Ser Leu Phe Ala Phe Arg Gly
165 170 175

Gln Tyr Arg Cys Glu Leu Asp Glu Thr Ala Val Arg Pro Gly Tyr Pro
180 185 190

Lys Leu Ile Gln Asp Val Trp Gly Ile Glu Gly Pro Ile Asp Ala Ala
195 200 205

Phe Thr Arg Ile Asn Cys Gln Gly Lys Thr Tyr Leu Phe Lys Gly Ser
210 215 220

Gln Tyr Trp Arg Phe Glu Asp Gly Val Leu Asp Pro Gly Tyr Pro Arg
225 230 235 240

Asn Ile Ser Glu Gly Phe Ser Gly Ile Pro Asp Asn Val Asp Ala Ala
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245

250

255

Phe Ala Leu Pro Ala His Arg Tyr Ser Gly Arg Glu Arg Val Tyr Phe
 260 265 270

Phe Lys Gly Lys Gln Tyr Trp Glu His Glu Phe Gln Gln Gln Pro Ser
 275 280 285

Gln Glu Glu Cys Glu Gly Ser Ser Leu Ser Ala Val Phe Glu His Phe
 290 295 300

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 325 330 335

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 355 360 365

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 370 375 380

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 385 390 395 400

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 405 410 415

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 420 425 430

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<211> 9511

<212> DNA

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<213> Mus musculus

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<222> (121)..(9372)

<223> laminin-2 alpha chain

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Gly Glu Lys Gly Pro Glu Met Tyr Cys Lys Leu Val Glu His Val Pro
35 40 45

ggg cag cct gtg agg aac cct cag tgc cga atc tgc aat cag aac agc 312
Gly Gln Pro Val Arg Asn Pro Gln Cys Arg Ile Cys Asn Gln Asn Ser
50 55 60

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Ser Asn Pro Tyr Gln Arg His Pro Ile Thr Asn Ala Ile Asp Gly Lys
65 70 75 80

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Asn Thr Trp Trp Gln Ser Pro Ser Ile Lys Asn Gly Val Glu Tyr His
85 90 95

tat gtg aca att act ctg gat tta cag cag gtg ttc cag att gcc tac 456
Tyr Val Thr Ile Thr Leu Asp Leu Gln Gln Val Phe Gln Ile Ala Tyr
100 105 110

gta att gtg aag gca gcc aat tcc cct cgg cct gga aac tgg att ttg 504
Val Ile Val Lys Ala Ala Asn Ser Pro Arg Pro Gly Asn Trp Ile Leu
115 120 125

gaa cgt tcc ctg gat gac gtg gag tac aaa ccc tgg cag tat cat gcg 552
Glu Arg Ser Leu Asp Asp Val Glu Tyr Lys Pro Trp Gln Tyr His Ala
130 135 140

gtg aca gac acg gag tgc ctg acc ctc tac aat atc tat ccc cgc act 600
Val Thr Asp Thr Glu Cys Leu Thr Leu Tyr Asn Ile Tyr Pro Arg Thr
145 150 155 160

gga cca cca tcc tac gcc aaa gat gat gag gtc atc tgc act tca ttt 648
Gly Pro Pro Ser Tyr Ala Lys Asp Asp Glu Val Ile Cys Thr Ser Phe
165 170 175

tat tcg aag atc cac cct tta gaa aat gga gag att cac att tct ttg 696
Tyr Ser Lys Ile His Pro Leu Glu Asn Gly Glu Ile His Ile Ser Leu
180 185 190

atc aat ggg aga cca agt gct gat gac ccc tcc cct gaa ctc ctg gaa 744
Ile Asn Gly Arg Pro Ser Ala Asp Asp Pro Ser Pro Glu Leu Leu Glu
195 200 205

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195	200	205	
ttc acc tct gct cgc tac att cgc ctg aga ttt cag agg atc cgc acc Phe Thr Ser Ala Arg Tyr Ile Arg Leu Arg Phe Gln Arg Ile Arg Thr 210 215 220			792
ttg aat gca gac ttg atg atg ttt gct cac aaa gac ccc aga gaa atc Leu Asn Ala Asp Leu Met Met Phe Ala His Lys Asp Pro Arg Glu Ile 225 230 235 240			840
gat ccc att gtc aca cga aga tat tac tat tct gtc aag gat att tca Asp Pro Ile Val Thr Arg Arg Tyr Tyr Tyr Ser Val Lys Asp Ile Ser 245 250 255			888
gtt ggc ggg atg tgc atc tgt tat ggt cat gcc cgg gct tgt cca ctt Val Gly Gly Met Cys Ile Cys Tyr Gly His Ala Arg Ala Cys Pro Leu 260 265 270			936
gac cct gca aca aat aaa tca cgc tgt gag tgt gaa cat aac acc tgt Asp Pro Ala Thr Asn Lys Ser Arg Cys Glu Cys Glu His Asn Thr Cys 275 280 285			984
ggg gaa agc tgt gac agg tgc tgt cca gga ttc cat cag aag cct tgg Gly Glu Ser Cys Asp Arg Cys Cys Pro Gly Phe His Gln Lys Pro Trp 290 295 300			1032
aga gct gga acc ttc ctc acc aag tct gag tgt gaa gca tgc aat tgt Arg Ala Gly Thr Phe Leu Thr Lys Ser Glu Cys Glu Ala Cys Asn Cys 305 310 315 320			1080
cac gga aaa gct gag gaa tgc tat tat gat gaa act gtt gct agc aga His Gly Lys Ala Glu Glu Cys Tyr Tyr Asp Glu Thr Val Ala Ser Arg 325 330 335			1128
aat cta agt tta aat ata cat ggg aag tac atc gga ggg ggt gtg tgc Asn Leu Ser Leu Asn Ile His Gly Lys Tyr Ile Gly Gly Gly Val Cys 340 345 350			1176
atc aac tgc aca cat aac acg gct ggg ata aat tgt gag aca tgt gtt Ile Asn Cys Thr His Asn Thr Ala Gly Ile Asn Cys Glu Thr Cys Val 355 360 365			1224
gat gga ttc ttc aga ccc aaa ggg gtg tca cca aat tat cca aga cca Asp Gly Phe Phe Arg Pro Lys Gly Val Ser Pro Asn Tyr Pro Arg Pro 370 375 380			1272
tgc cag cca tgt cac tgt gat cca act ggc tcc ctt agt gaa gtc tgt Cys Gln Pro Cys His Cys Asp Pro Thr Gly Ser Leu Ser Glu Val Cys 385 390 395 400			1320
gtc aaa gat gag aaa tac gcc cag cga ggg ttg aaa cct gga tcc tgt Val Lys Asp Glu Lys Tyr Ala Gln Arg Gly Leu Lys Pro Gly Ser Cys 405 410 415			1368
cac tgc aaa act ggc ttt gga ggc gtg aac tgt gat cgc tgt gtc agg His Cys Lys Thr Gly Phe Gly Gly Val Asn Cys Asp Arg Cys Val Arg 420 425 430			1416
ggt tac cat ggt tac cca gac tgc caa ccc tgt aac tgt agt ggc ttg Gly Tyr His Gly Tyr Pro Asp Cys Gln Pro Cys Asn Cys Ser Gly Leu 435 440 445			1464
ggg agc aca aat gag gac cct tgc gtt ggg ccc tgt agc tgt aag gag 450 455 460			1512

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Gly	Ser	Thr	Asn	Glu	Asp	Pro	Cys	Val	Gly	Pro	Cys	Ser	Cys	Lys	Glu	
450						455					460					
aat	ggt	gaa	ggt	gaa	gac	tgt	agt	cgt	tgc	aaa	tct	ggt	ttc	ttc	aac	1560
Asn	Val	Glu	Gly	Glu	Asp	Cys	Ser	Arg	Cys	Lys	Ser	Gly	Phe	Phe	Asn	
465					470					475					480	
ttg	caa	gaa	gat	aat	cag	aaa	ggc	tgt	gag	gag	tgt	ttc	tgt	tca	gga	1608
Leu	Gln	Glu	Asp	Asn	Gln	Lys	Gly	Cys	Glu	Glu	Cys	Phe	Cys	Ser	Gly	
				485					490					495		
gta	tca	aac	aga	tgt	cag	agt	tcc	tac	tgg	acc	tat	ggg	aat	att	caa	1656
Val	Ser	Asn	Arg	Cys	Gln	Ser	Ser	Tyr	Trp	Thr	Tyr	Gly	Asn	Ile	Gln	
			500					505					510			
gac	atg	cgt	ggt	tgg	tat	ctc	aca	gac	ctc	tct	ggc	cgc	att	cgg	atg	1704
Asp	Met	Arg	Gly	Trp	Tyr	Leu	Thr	Asp	Leu	Ser	Gly	Arg	Ile	Arg	Met	
		515					520					525				
gct	ccc	cag	ctt	gat	aac	cct	gac	tca	cct	cag	cag	atc	agc	atc	agt	1752
Ala	Pro	Gln	Leu	Asp	Asn	Pro	Asp	Ser	Pro	Gln	Gln	Ile	Ser	Ile	Ser	
	530					535					540					
aac	tct	gag	gcc	cgg	aaa	tcc	ctg	ctt	gat	ggg	tac	tac	tgg	agt	gca	1800
Asn	Ser	Glu	Ala	Arg	Lys	Ser	Leu	Leu	Asp	Gly	Tyr	Tyr	Trp	Ser	Ala	
545					550					555					560	
ccg	cct	cca	tat	ctg	gga	aac	aga	ctt	cca	gct	gtt	ggg	gga	cag	ttg	1848
Pro	Pro	Pro	Tyr	Leu	Gly	Asn	Arg	Leu	Pro	Ala	Val	Gly	Gly	Gln	Leu	
				565					570					575		
tca	ttt	acc	atc	tca	tat	gac	ctc	gaa	gaa	gag	gaa	gac	gat	aca	gaa	1896
Ser	Phe	Thr	Ile	Ser	Tyr	Asp	Leu	Glu	Glu	Glu	Glu	Asp	Asp	Thr	Glu	
			580					585					590			
aaa	ctc	ctt	cag	ctg	atg	att	atc	ttt	gag	gga	aat	gac	tta	aga	atc	1944
Lys	Leu	Leu	Gln	Leu	Met	Ile	Ile	Phe	Glu	Gly	Asn	Asp	Leu	Arg	Ile	
		595					600					605				
agc	aca	gcg	tat	aag	gag	gtg	tac	tta	gag	cca	tct	gaa	gaa	cac	gtt	1992
Ser	Thr	Ala	Tyr	Lys	Glu	Val	Tyr	Leu	Glu	Pro	Ser	Glu	Glu	His	Val	
	610					615					620					
gag	gag	gtg	tca	ctc	aaa	gaa	gag	gcc	ttt	act	ata	cat	gga	aca	aat	2040
Glu	Glu	Val	Ser	Leu	Lys	Glu	Glu	Ala	Phe	Thr	Ile	His	Gly	Thr	Asn	
625					630					635					640	
ttg	cca	gtc	act	aga	aaa	gat	ttc	atg	att	gtt	ctc	aca	aat	ttg	gga	2088
Leu	Pro	Val	Thr	Arg	Lys	Asp	Phe	Met	Ile	Val	Leu	Thr	Asn	Leu	Gly	
				645					650					655		
gag	atc	ctt	atc	caa	atc	aca	tac	aac	tta	ggg	atg	gac	gcc	atc	ttc	2136
Glu	Ile	Leu	Ile	Gln	Ile	Thr	Tyr	Asn	Leu	Gly	Met	Asp	Ala	Ile	Phe	
			660					665					670			
agg	ctg	agt	tct	gtc	aat	ctt	gaa	tct	cct	gtc	cct	tat	cct	act	gat	2184
Arg	Leu	Ser	Ser	Val	Asn	Leu	Glu	Ser	Pro	Val	Pro	Tyr	Pro	Thr	Asp	
		675					680					685				
aga	cgt	att	gca	act	gat	gtg	gaa	gtt	tgc	cag	tgt	cca	cct	ggg	tac	2232
Arg	Arg	Ile	Ala	Thr	Asp	Val	Glu	Val	Cys	Gln	Cys	Pro	Pro	Gly	Tyr	
	690					695					700					

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agt ggc agc tct tgt gaa aca tgt tgg cct agg cac cga aga gtt aac Ser Gly Ser Ser Cys Glu Thr Cys Trp Pro Arg His Arg Arg Val Asn 705 710 715 720	2280
ggc acc att ttt ggt ggc att tgt gaa cca tgt cag tgc ttt gct cat Gly Thr Ile Phe Gly Gly Ile Cys Glu Pro Cys Gln Cys Phe Ala His 725 730 735	2328
gca gaa gcc tgt gat gac atc aca gga gaa tgt ctg aac tgt aag gat Ala Glu Ala Cys Asp Asp Ile Thr Gly Glu Cys Leu Asn Cys Lys Asp 740 745 750	2376
cac aca ggt ggg ccg tac tgc aat gaa tgt ctc cct gga ttc tat ggt His Thr Gly Gly Pro Tyr Cys Asn Glu Cys Leu Pro Gly Phe Tyr Gly 755 760 765	2424
gat cct act cga gga agc cct gaa gac tgt cag ccc tgt gcc tgt cca Asp Pro Thr Arg Gly Ser Pro Glu Asp Cys Gln Pro Cys Ala Cys Pro 770 775 780	2472
ctc aat atc cca tca aat aac ttt agt cca aca tgc cat tta gac cgg Leu Asn Ile Pro Ser Asn Asn Phe Ser Pro Thr Cys His Leu Asp Arg 785 790 800	2520
agt ctg gga ttg atc tgt gac gag tgt cct att ggg tac aca gga ccg Ser Leu Gly Leu Ile Cys Asp Glu Cys Pro Ile Gly Tyr Thr Gly Pro 805 810 815	2568
cgc tgt gag agg tgt gca gaa ggc tat ttt gga caa cct tcc gta cct Arg Cys Glu Arg Cys Ala Glu Gly Tyr Phe Gly Gln Pro Ser Val Pro 820 825 830	2616
gga gga tca tgt cag cca tgc caa tgc aat gac aac ctt gac tac tcc Gly Gly Ser Cys Gln Pro Cys Gln Cys Asn Asp Asn Leu Asp Tyr Ser 835 840 845	2664
atc cct ggc agc tgt gac agc ctg tct ggc tcc tgt ctg att tgt aag Ile Pro Gly Ser Cys Asp Ser Leu Ser Gly Ser Cys Leu Ile Cys Lys 850 855 860	2712
cca ggt aca aca ggc cgg tac tgt gag ctg tgt gct gat ggg tat ttt Pro Gly Thr Thr Gly Arg Tyr Cys Glu Leu Cys Ala Asp Gly Tyr Phe 865 870 875 880	2760
gga gac gcg gtt aat aca aag aac tgt caa cca tgc cgt tgt gat atc Gly Asp Ala Val Asn Thr Lys Asn Cys Gln Pro Cys Arg Cys Asp Ile 885 890 895	2808
aat ggc tcc ttc tca gag gat tgt cac aca aga act ggg caa tgt gag Asn Gly Ser Phe Ser Glu Asp Cys His Thr Arg Thr Gly Gln Cys Glu 900 905 910	2856
tgc aga ccc aat gtt cag ggg cgg cac tgt gac gag tgt aag cct gaa Cys Arg Pro Asn Val Gln Gly Arg His Cys Asp Glu Cys Lys Pro Glu 915 920 925	2904
acc ttt ggc ctg caa ctg gga agg ggt tgt ctg ccc tgc aac tgc aat Thr Phe Gly Leu Gln Leu Gly Arg Gly Cys Leu Pro Cys Asn Cys Asn 930 935 940	2952
tct ttt ggg tct aag tcc ttt gac tgt gaa gca agt ggg cag tgc tgg Ser Phe Gly Ser Lys Ser Phe Asp Cys Glu Ala Ser Gly Gln Cys Trp 945 950 955 960	3000

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tgc cag cct gga gta gca ggg aag aaa tgt gac cgt tgt gcc cat ggc Cys Gln Pro Gly Val Ala Gly Lys Lys Cys Asp Arg Cys Ala His Gly 965 970 975	3048
tac ttc aac ttc caa gaa gga ggc tgc ata gct tgt gac tgt tct cat Tyr Phe Asn Phe Gln Glu Gly Gly Cys Ile Ala Cys Asp Cys Ser His 980 985 990	3096
ctg ggc aac aac tgt gac cca aaa act ggc caa tgc att tgc cca ccc Leu Gly Asn Asn Cys Asp Pro Lys Thr Gly Gln Cys Ile Cys Pro Pro 995 1000 1005	3144
aat acc act gga gaa aag tgt tct gag tgt ctt ccc aac acc tgg Asn Thr Thr Gly Glu Lys Cys Ser Glu Cys Leu Pro Asn Thr Trp 1010 1015 1020	3189
ggt cac agc att gtc acc ggc tgt aag gtt tgt aac tgc agc act Gly His Ser Ile Val Thr Gly Cys Lys Val Cys Asn Cys Ser Thr 1025 1030 1035	3234
gtg ggg tcc ttg gct tct cag tgc aat gta aac acg ggc cag tgc Val Gly Ser Leu Ala Ser Gln Cys Asn Val Asn Thr Gly Gln Cys 1040 1045 1050	3279
agc tgt cat cca aaa ttc tct ggt atg aaa tgc tca gag tgc agc Ser Cys His Pro Lys Phe Ser Gly Met Lys Cys Ser Glu Cys Ser 1055 1060 1065	3324
cga ggt cac tgg aac tat cct ctc tgc act cta tgt gac tgc ttc Arg Gly His Trp Asn Tyr Pro Leu Cys Thr Leu Cys Asp Cys Phe 1070 1075 1080	3369
ctt cca ggc aca gat gcc acg act tgt gat ctg gag act agg aaa Leu Pro Gly Thr Asp Ala Thr Thr Cys Asp Leu Glu Thr Arg Lys 1085 1090 1095	3414
tgc tcc tgt agt gat caa act gga cag tgc agc tgt aag gtg aat Cys Ser Cys Ser Asp Gln Thr Gly Gln Cys Ser Cys Lys Val Asn 1100 1105 1110	3459
gtg gaa ggc gtc cac tgt gac agg tgc cgg cct ggc aaa ttt gga Val Glu Gly Val His Cys Asp Arg Cys Arg Pro Gly Lys Phe Gly 1115 1120 1125	3504
cta gat gcc aag aac cca ctt ggc tgc agc agc tgc tac tgc ttt Leu Asp Ala Lys Asn Pro Leu Gly Cys Ser Ser Cys Tyr Cys Phe 1130 1135 1140	3549
gga gtt act agt caa tgc tct gaa gca aag ggc ctg atc cgt acg Gly Val Thr Ser Gln Cys Ser Glu Ala Lys Gly Leu Ile Arg Thr 1145 1150 1155	3594
tgg gtg act ttg agt gat gaa cag acc att cta cct ctg gtg gat Trp Val Thr Leu Ser Asp Glu Gln Thr Ile Leu Pro Leu Val Asp 1160 1165 1170	3639
gag gcc ctg cag cac acg act acc aaa ggc att gct ttc cag aaa Glu Ala Leu Gln His Thr Thr Thr Lys Gly Ile Ala Phe Gln Lys 1175 1180 1185	3684
cca gag att gtt gca aag atg gat gaa gtc agg caa gag ctc cat Pro Glu Ile Val Ala Lys Met Asp Glu Val Arg Gln Glu Leu His 1190 1195	3729

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1190	1195	1200	
ttg gaa cct ttt tac tgg Leu Glu Pro Phe Tyr Trp	aaa ctc cca caa caa Lys Leu Pro Gln Gln	ttt gaa ggg aaa Phe Glu Gly Lys	3774
1205	1210	1215	
aag ttg atg gct tat ggt Lys Leu Met Ala Tyr Gly	ggc aaa ctc aag tat Gly Lys Leu Lys Tyr	gcc atc tat ttt Ala Ile Tyr Phe	3819
1220	1225	1230	
gag gct cgg gat gag aca Glu Ala Arg Asp Glu Thr	ggc ttt gcc aca tat Gly Phe Ala Thr Tyr	aaa cct caa gtt Lys Pro Gln Val	3864
1235	1240	1245	
atc att cga ggt gga act Ile Ile Arg Gly Gly Thr	cct act cat gct aga Pro Thr His Ala Arg	att att acc aga Ile Ile Thr Arg	3909
1250	1255	1260	
cac atg gct gcc cct ctc His Met Ala Ala Pro Leu	att ggc cag ttg aca Ile Gly Gln Leu Thr	cgg cat gaa ata Arg His Glu Ile	3954
1265	1270	1275	
gaa atg aca gag aaa gaa Glu Met Thr Glu Lys Glu	tgg aaa tat tat ggt Trp Lys Tyr Tyr Gly	gat gat cct cga Asp Asp Pro Arg	3999
1280	1285	1290	
atc agt aga act gtg acc Ile Ser Arg Thr Val Thr	cgt gaa gac ttc ttg Arg Glu Asp Phe Leu	gat ata cta tat Asp Ile Leu Tyr	4044
1295	1300	1305	
gat att cac tat atc ctt Asp Ile His Tyr Ile Leu	atc aag gct act tat Ile Lys Ala Thr Tyr	gga aac gtt gtg Gly Asn Val Val	4089
1310	1315	1320	
aga caa agc cgc att tct Arg Gln Ser Arg Ile Ser	gaa atc tcc atg gaa Glu Ile Ser Met Glu	gta gct gaa cca Val Ala Glu Pro	4134
1325	1330	1335	
gga cat gta tta gca ggg Gly His Val Leu Ala Gly	agc cca cca gca cac Ser Pro Pro Ala His	ttg ata gaa aga Leu Ile Glu Arg	4179
1340	1345	1350	
tgc gat tgc cct cct ggc Cys Asp Cys Pro Pro Gly	tat tct ggc ttg tct Tyr Ser Gly Leu Ser	tgt gag acg tgt Cys Glu Thr Cys	4224
1355	1360	1365	
gca cca gga ttt tac cga Ala Pro Gly Phe Tyr Arg	ctt cgt tct gaa cca Leu Arg Ser Glu Pro	ggt ggg cgg act Gly Gly Arg Thr	4269
1370	1375	1380	
cct gga cca acc tta ggg Pro Gly Pro Thr Leu Gly	acc tgt gtt ccc tgc Thr Cys Val Pro Cys	caa tgt aat gga Gln Cys Asn Gly	4314
1385	1390	1395	
cac agc agt cag tgt gat His Ser Ser Gln Cys Asp	cct gag acc tca gta Pro Glu Thr Ser Val	tgc cag aat tgt Cys Gln Asn Cys	4359
1400	1405	1410	
cag cat cac act gct ggt Gln His His Thr Ala Gly	gac ttc tgt gag cgc Asp Phe Cys Glu Arg	tgt gcc ctt ggc Cys Ala Leu Gly	4404
1415	1420	1425	
tac tat gga atc gtc agg gga ttg cca aat gac	tgc caa cca tgt		4449

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Tyr	Tyr	Gly	Ile	Val	Arg	Gly	Leu	Pro	Asn	Asp	Cys	Gln	Pro	Cys	
1430	1435	1440													
gct	tgt	cct	ctg	att	tcg	ccc	agc	aac	aat	ttc	agc	ccc	tct	tgt	4494
Ala	Cys	Pro	Leu	Ile	Ser	Pro	Ser	Asn	Asn	Phe	Ser	Pro	Ser	Cys	
1445	1450	1455													
gta	ttg	gaa	ggt	ctg	gaa	gat	tac	cgt	tgc	acc	gcc	tgc	cca	agg	4539
Val	Leu	Glu	Gly	Leu	Glu	Asp	Tyr	Arg	Cys	Thr	Ala	Cys	Pro	Arg	
1460	1465	1470													
ggc	tat	gaa	gga	cag	tac	tgt	gaa	agg	tgt	gcc	cca	ggc	tat	act	4584
Gly	Tyr	Glu	Gly	Gln	Tyr	Cys	Glu	Arg	Cys	Ala	Pro	Gly	Tyr	Thr	
1475	1480	1485													
ggc	agc	cca	agc	agc	ccc	gga	ggc	tcc	tgc	caa	gaa	tgt	gag	tgt	4629
Gly	Ser	Pro	Ser	Ser	Pro	Gly	Gly	Ser	Cys	Gln	Glu	Cys	Glu	Cys	
1490	1495	1500													
gac	cct	tat	ggc	tcc	cta	ccg	gtt	ccc	tgt	gac	cgg	gtc	aca	gga	4674
Asp	Pro	Tyr	Gly	Ser	Leu	Pro	Val	Pro	Cys	Asp	Arg	Val	Thr	Gly	
1505	1510	1515													
ctc	tgc	acg	tgc	cgc	cct	gga	gcc	aca	gga	agg	aag	tgt	gat	ggc	4719
Leu	Cys	Thr	Cys	Arg	Pro	Gly	Ala	Thr	Gly	Arg	Lys	Cys	Asp	Gly	
1520	1525	1530													
tgc	gag	cac	tgg	cat	gca	cgc	gag	ggt	gca	gag	tgt	gtc	ttt	tgt	4764
Cys	Glu	His	Trp	His	Ala	Arg	Glu	Gly	Ala	Glu	Cys	Val	Phe	Cys	
1535	1540	1545													
gga	gac	gag	tgt	aca	ggc	ctt	ctt	ctt	ggt	gac	ctg	gct	cgt	cta	4809
Gly	Asp	Glu	Cys	Thr	Gly	Leu	Leu	Leu	Gly	Asp	Leu	Ala	Arg	Leu	
1550	1555	1560													
gag	cag	atg	acc	atg	aac	atc	aac	ctc	acg	ggc	cca	ctg	cct	gct	4854
Glu	Gln	Met	Thr	Met	Asn	Ile	Asn	Leu	Thr	Gly	Pro	Leu	Pro	Ala	
1565	1570	1575													
cca	tat	aaa	att	ctg	tat	ggt	ctt	gaa	aat	aca	act	cag	gaa	ctc	4899
Pro	Tyr	Lys	Ile	Leu	Tyr	Gly	Leu	Glu	Asn	Thr	Thr	Gln	Glu	Leu	
1580	1585	1590													
aag	cac	ctg	cta	tca	ccg	caa	cgg	gca	cca	gag	agg	ctc	att	cag	4944
Lys	His	Leu	Leu	Ser	Pro	Gln	Arg	Ala	Pro	Glu	Arg	Leu	Ile	Gln	
1595	1600	1605													
ttg	gca	gag	ggc	aac	gtg	aac	aca	ctt	gtg	atg	gaa	aca	aat	gag	4989
Leu	Ala	Glu	Gly	Asn	Val	Asn	Thr	Leu	Val	Met	Glu	Thr	Asn	Glu	
1610	1615	1620													
ctg	cta	acc	aga	gca	acc	aaa	gtg	aca	gca	gat	ggt	gag	caa	aca	5034
Leu	Leu	Thr	Arg	Ala	Thr	Lys	Val	Thr	Ala	Asp	Gly	Glu	Gln	Thr	
1625	1630	1635													
gga	caa	gat	gct	gag	agg	acc	aac	tcc	aga	gca	gaa	tcc	ttg	gaa	5079
Gly	Gln	Asp	Ala	Glu	Arg	Thr	Asn	Ser	Arg	Ala	Glu	Ser	Leu	Glu	
1640	1645	1650													
gaa	ttc	att	aaa	ggg	ctt	gtc	cag	gat	gct	gaa	gcc	ata	aat	gaa	5124
Glu	Phe	Ile	Lys	Gly	Leu	Val	Gln	Asp	Ala	Glu	Ala	Ile	Asn	Glu	
1655	1660	1665													

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aaa gct gta aaa cta aat gaa acc tta gga aat caa gat aag aca Lys Ala Val Lys Leu Asn Glu Thr Leu Gly Asn Gln Asp Lys Thr 1670 1675 1680	5169
gca gag aga aac ttg gag gag ctt caa aag gaa atc gac cgg atg Ala Glu Arg Asn Leu Glu Glu Leu Gln Lys Glu Ile Asp Arg Met 1685 1690 1695	5214
ctg aag gaa ctg aga agt aaa gat ctt caa aca cag aag gaa gtt Leu Lys Glu Leu Arg Ser Lys Asp Leu Gln Thr Gln Lys Glu Val 1700 1705 1710	5259
gct gag gat gag ctc gtg gca gca gaa ggc ctt ctg aag aga gta Ala Glu Asp Glu Leu Val Ala Ala Glu Gly Leu Leu Lys Arg Val 1715 1720 1725	5304
aac aag ctg ttt gga gag ccc aga gcc cag aat gaa gat atg gaa Asn Lys Leu Phe Gly Glu Pro Arg Ala Gln Asn Glu Asp Met Glu 1730 1735 1740	5349
aag gat ctc cag cag aaa ctg gca gag tac aag aac aaa ctt gat Lys Asp Leu Gln Gln Lys Leu Ala Glu Tyr Lys Asn Lys Leu Asp 1745 1750 1755	5394
gat gct tgg gat cta ttg aga gaa gcc act gat aaa acc cga gat Asp Ala Trp Asp Leu Leu Arg Glu Ala Thr Asp Lys Thr Arg Asp 1760 1765 1770	5439
gct aat cgt ttg tct gct gcc aat caa aaa aac atg acc ata ctg Ala Asn Arg Leu Ser Ala Ala Asn Gln Lys Asn Met Thr Ile Leu 1775 1780 1785	5484
gag aca aag aag gag gct att gaa ggt agc aaa cga caa ata gag Glu Thr Lys Lys Glu Ala Ile Glu Gly Ser Lys Arg Gln Ile Glu 1790 1795 1800	5529
aac act tta aag gaa ggc aat gac atc ctt gat gaa gcc aat caa Asn Thr Leu Lys Glu Gly Asn Asp Ile Leu Asp Glu Ala Asn Gln 1805 1810 1815	5574
ctc tta ggt gaa atc aac tca gtc ata gat tat gtc gac gac att Leu Leu Gly Glu Ile Asn Ser Val Ile Asp Tyr Val Asp Asp Ile 1820 1825 1830	5619
aaa act aag ttg cca cca atg tcc gag gag ctg agt gac aaa ata Lys Thr Lys Leu Pro Pro Met Ser Glu Glu Leu Ser Asp Lys Ile 1835 1840 1845	5664
gat gac ctc gcc cag gaa ata aag gac aga agg ctt gct gag aag Asp Asp Leu Ala Gln Glu Ile Lys Asp Arg Arg Leu Ala Glu Lys 1850 1855 1860	5709
gtg ttc cag gct gag agc cat gct gct cag ctg aac gac tcg tct Val Phe Gln Ala Glu Ser His Ala Ala Gln Leu Asn Asp Ser Ser 1865 1870 1875	5754
gct gta ctt gat gga atc ctg gat gag gct aag aac atc tct ttc Ala Val Leu Asp Gly Ile Leu Asp Glu Ala Lys Asn Ile Ser Phe 1880 1885 1890	5799
aat gcc acg gca gcc ttc aga gct tac agt aat att aaa gac tac Asn Ala Thr Ala Ala Phe Arg Ala Tyr Ser Asn Ile Lys Asp Tyr 1895 1900 1905	5844

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att Ile	gat Asp 1910	gaa Glu	gct Ala	gag Glu	aaa Lys	gtg Val 1915	gcc Ala	aga Arg	gaa Glu	gcc Ala	aaa Lys 1920	gag Glu	ctt Leu	gcc Ala	5889
caa Gln	ggg Gly 1925	gct Ala	aca Thr	aaa Lys	ctg Leu	gca Ala 1930	aca Thr	agt Ser	cct Pro	cag Gln	ggc Gly 1935	tta Leu	tta Leu	aaa Lys	5934
gaa Glu	gat Asp 1940	gcc Ala	aaa Lys	ggc Gly	tcc Ser	ctt Leu 1945	cag Gln	aaa Lys	agc Ser	ttc Phe	agg Arg 1950	atc Ile	ctc Leu	aat Asn	5979
gaa Glu	gcc Ala 1955	aag Lys	aag Lys	cta Leu	gca Ala	aac Asn 1960	gat Asp	gtg Val	aaa Lys	gga Gly	aat Asn 1965	cac His	aat Asn	gat Asp	6024
cta Leu	aat Asn 1970	gac Asp	ctg Leu	aaa Lys	acc Thr	agg Arg 1975	tta Leu	gaa Glu	act Thr	gct Ala	gac Asp 1980	ctt Leu	aga Arg	aac Asn	6069
agt Ser	gga Gly 1985	ctt Leu	cta Leu	gga Gly	gct Ala	cta Leu 1990	aat Asn	gac Asp	acc Thr	atg Met	gac Asp 1995	aag Lys	tta Leu	tca Ser	6114
gcc Ala	att Ile 2000	aca Thr	aat Asn	gac Asp	acg Thr	gct Ala 2005	gct Ala	aaa Lys	ctg Leu	cag Gln	gct Ala 2010	gtc Val	aaa Lys	gag Glu	6159
aaa Lys	gcc Ala 2015	aga Arg	gaa Glu	gcc Ala	aat Asn	gac Asp 2020	aca Thr	gca Ala	aaa Lys	gct Ala	gtc Val 2025	ctg Leu	gcc Ala	cag Gln	6204
gtt Val	aag Lys 2030	gac Asp	ctg Leu	cat His	cag Gln	aac Asn 2035	cta Leu	gat Asp	ggc Gly	ctg Leu	aag Lys 2040	caa Gln	aac Asn	tac Tyr	6249
aat Asn	aaa Lys 2045	ctg Leu	gca Ala	gac Asp	agc Ser	gtg Val 2050	gcc Ala	aaa Lys	acg Thr	aac Asn	gct Ala 2055	gtg Val	gtg Val	aaa Lys	6294
gat Asp	cct Pro 2060	tcc Ser	aaa Lys	aac Asn	aaa Lys	atc Ile 2065	att Ile	gca Ala	gat Asp	gca Ala	ggc Gly 2070	act Thr	tcc Ser	gtg Val	6339
aga Arg	aat Asn 2075	cta Leu	gaa Glu	cag Gln	gaa Glu	gct Ala 2080	gac Asp	cgg Arg	cta Leu	atc Ile	gac Asp 2085	aaa Lys	ctc Leu	aag Lys	6384
ccc Pro	atc Ile 2090	aag Lys	gag Glu	ctt Leu	gag Glu	gac Asp 2095	aac Asn	cta Leu	aag Lys	aaa Lys	aac Asn 2100	att Ile	tct Ser	gaa Glu	6429
ata Ile	aag Lys 2105	gaa Glu	ctg Leu	atc Ile	aac Asn	caa Gln 2110	gct Ala	cgg Arg	aaa Lys	caa Gln	gct Ala 2115	aac Asn	tct Ser	atc Ile	6474
aaa Lys	gta Val 2120	tct Ser	gtt Val	tct Ser	tcg Ser	gga Gly 2125	ggg Gly	gac Asp	tgt Cys	gtt Val	cgg Arg 2130	aca Thr	tac Tyr	agg Arg	6519
cca Pro	gaa Glu	atc Ile	aag Lys	aaa Lys	gga Gly	agc Ser	tac Tyr	aat Asn	aac Asn	atc Ile	gtt Val	gtc Val	cat His	gtc Val	6564

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2135	2140	2145	
aag acc gct gtt gcc gac Lys Thr 2150 Ala Val Ala Asp	aac ctc ctt ttt tat ctt Asn Leu Leu Phe Tyr Leu 2155 2160	gga agt gcc Gly Ser Ala	6609
aaa ttt att gac ttt ctt Lys Phe 2165 Ile Asp Phe Leu	gct ata gaa atg cgc Ala Ile Glu Met Arg Lys 2170 2175	aaa ggc aaa gtc Lys Gly Lys Val	6654
agc ttc ctc tgg att gtt Ser Phe 2180 Leu Trp Ile Val	ggc tct gga gtt ggc Gly Ser Gly Val Gly 2185 2190	cga gta ggg ttt Arg Val Gly Phe	6699
cca gac ttg acc atc gac Pro Asp 2195 Leu Thr Ile Asp	gac tcc tat tgg tac Asp Ser Tyr Trp Tyr 2200 2205	cgt att gaa gca Arg Ile Glu Ala	6744
tca aga acg gga aga aat Ser Arg 2210 Thr Gly Arg Asn	gga tct att tct gtg Gly Ser Ile Ser Val 2215 2220	aga gct tta gat Arg Ala Leu Asp	6789
gga ccc aaa gcc agt atg Gly Pro 2225 Lys Ala Ser Met	gta ccc agc acc tac Val Pro Ser Thr Tyr 2230 2235	cat tca gtg tct His Ser Val Ser	6834
cct ccc ggg tat act atc Pro Pro 2240 Gly Tyr Thr Ile	cta gat gtg gat gca Leu Asp Val Asp Ala 2245 2250	aat gca atg ctg Asn Ala Met Leu	6879
ttt gtt ggt ggc ctg acc Phe Val 2255 Gly Gly Leu Thr	gga aaa ata aag aag Gly Lys Ile Lys Lys 2260 2265	gcc gat gct gta Ala Asp Ala Val	6924
cgt gtg atc acc ttc acc Arg Val 2270 Ile Thr Phe Thr	ggc tgt atg gga gaa Gly Cys Met Gly Glu 2275 2280	aca tac ttt gac Thr Tyr Phe Asp	6969
aac aaa cct ata ggt tta Asn Lys 2285 Pro Ile Gly Leu	tgg aac ttc cgg gag Trp Asn Phe Arg Glu 2290 2295	aaa gaa ggc gac Lys Glu Gly Asp	7014
tgt aag gga tgt act gtc Cys Lys 2300 Gly Cys Thr Val	agc cca caa gtg gaa Ser Pro Gln Val Glu 2305 2310	gat agt gag ggg Asp Ser Glu Gly	7059
act att cag ttt gat ggt Thr Ile 2315 Gln Phe Asp Gly	gaa ggc tat gca tta Glu Gly Tyr Ala Leu 2320 2325	gtg agc cgg ccc Val Ser Arg Pro	7104
atc cgc tgg tac ccc aac Ile Arg 2330 Trp Tyr Pro Asn	atc tcc aca gtc atg Ile Ser Thr Val Met 2335 2340	ttc aag ttc cgg Phe Lys Phe Arg	7149
aca ttt tca tca agt gct Thr Phe 2345 Ser Ser Ser Ala	ctc ctg atg tat ctt Leu Leu Met Tyr Leu 2350 2355	gcc aca cga gac Ala Thr Arg Asp	7194
ctg aaa gat ttc atg agt Leu Lys 2360 Asp Phe Met Ser	gta gag ctc agt gat Val Glu Leu Ser Asp 2365 2370	gga cat gtg aaa Gly His Val Lys	7239
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Val	Ser	Tyr	Asp	Leu	Gly	Ser	Gly	Met	Thr	Ser	Val	Val	Ser	Asn	
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Gln	Asn	His	Asn	Asp	Gly	Lys	Trp	Lys	Ala	Phe	Thr	Leu	Ser	Arg	
	2390					2395					2400				
att	cag	aaa	caa	gcc	aac	ata	tcg	att	gtc	gac	atc	gat	tct	aac	7374
Ile	Gln	Lys	Gln	Ala	Asn	Ile	Ser	Ile	Val	Asp	Ile	Asp	Ser	Asn	
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cag	gag	gag	aat	gta	gct	act	tca	tct	tct	gga	aac	aac	ttt	ggt	7419
Gln	Glu	Glu	Asn	Val	Ala	Thr	Ser	Ser	Ser	Gly	Asn	Asn	Phe	Gly	
	2420					2425					2430				
ctt	gac	ttg	aaa	gca	gat	gac	aaa	ata	tat	ttt	ggt	ggc	ctg	cca	7464
Leu	Asp	Leu	Lys	Ala	Asp	Asp	Lys	Ile	Tyr	Phe	Gly	Gly	Leu	Pro	
	2435					2440					2445				
act	ctg	aga	aac	ttg	agt	atg	aaa	gca	agg	cca	gaa	gtc	aat	gtg	7509
Thr	Leu	Arg	Asn	Leu	Ser	Met	Lys	Ala	Arg	Pro	Glu	Val	Asn	Val	
	2450					2455					2460				
aag	aaa	tac	tcc	ggc	tcg	ctc	aaa	gat	att	gaa	att	tca	aga	aca	7554
Lys	Lys	Tyr	Ser	Gly	Cys	Leu	Lys	Asp	Ile	Glu	Ile	Ser	Arg	Thr	
	2465					2470					2475				
cct	tac	aat	ata	ctc	agc	agc	cct	gat	tat	gtt	ggt	gtg	acc	aaa	7599
Pro	Tyr	Asn	Ile	Leu	Ser	Ser	Pro	Asp	Tyr	Val	Gly	Val	Thr	Lys	
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Gly	Cys	Ser	Leu	Glu	Asn	Val	Asn	Thr	Val	Ser	Phe	Pro	Lys	Pro	
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Ile	Asn	Leu	Ser	Phe	Ser	Thr	Arg	Asn	Glu	Ser	Gly	Ile	Ile	Leu	
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Leu	Gly	Ser	Gly	Gly	Thr	Leu	Thr	Pro	Pro	Arg	Arg	Lys	Arg	Arg	
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Gln	Thr	Thr	Gln	Ala	Tyr	Tyr	Ala	Ile	Phe	Leu	Asn	Lys	Gly	Arg	
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Leu	Glu	Val	His	Leu	Ser	Ser	Gly	Thr	Arg	Thr	Met	Arg	Lys	Ile	
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Val	Ile	Lys	Pro	Glu	Pro	Asn	Leu	Phe	His	Asp	Gly	Arg	Glu	His	
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tct	gtc	cac	gta	gaa	aga	acc	aga	ggc	atc	ttc	act	gtt	caa	att	7959
Ser	Val	His	Val	Glu	Arg	Thr	Arg	Gly	Ile	Phe	Thr	Val	Gln	Ile	
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gat Asp	gaa Glu 2615	gac Asp	aga Arg	aga Arg	cat His	atc Ile 2620	caa Gln	aac Asn	ctg Leu	aca Thr	gag Glu 2625	gaa Glu	cag Gln	ccc Pro	8004
atc Ile	gaa Glu 2630	gtg Val	aaa Lys	aag Lys	ctc Leu	ttt Phe 2635	gtc Val	ggg Gly	ggt Gly	gct Ala	cct Pro 2640	cct Pro	gaa Glu	ttt Phe	8049
cag Gln	ccc Pro 2645	tcc Ser	cca Pro	ctc Leu	agg Arg	aat Asn 2650	att Ile	ccg Pro	gcc Ala	ttt Phe	caa Gln 2655	ggc Gly	tgt Cys	gtg Val	8094
tgg Trp	aac Asn 2660	ctt Leu	gtt Val	att Ile	aac Asn	tcc Ser 2665	atc Ile	ccc Pro	atg Met	gac Asp	ttt Phe 2670	gcg Ala	cag Gln	cct Pro	8139
ata Ile	gcc Ala 2675	ttc Phe	aaa Lys	aat Asn	gcc Ala	gac Asp 2680	att Ile	ggt Gly	cgc Arg	tgt Cys	acc Thr 2685	tat Tyr	caa Gln	aag Lys	8184
ccc Pro	cgg Arg 2690	gaa Glu	gat Asp	gag Glu	agt Ser	gaa Glu 2695	gca Ala	gtt Val	cca Pro	gct Ala	gaa Glu 2700	gtt Val	att Ile	gtc Val	8229
cag Gln	cct Pro 2705	cag Gln	tcg Ser	gtg Val	ccc Pro	acc Thr 2710	cct Pro	gcc Ala	ttc Phe	cct Pro	ttc Phe 2715	cca Pro	gtc Val	ccc Pro	8274
acc Thr	atg Met 2720	gtg Val	cat His	ggc Gly	cct Pro	tgt Cys 2725	gtt Val	gca Ala	gaa Glu	tca Ser	gaa Glu 2730	cca Pro	gct Ala	ctt Leu	8319
ctg Leu	aca Thr 2735	ggg Gly	agc Ser	aag Lys	cag Gln	ttt Phe 2740	ggg Gly	ctt Leu	tcc Ser	aga Arg	aac Asn 2745	agc Ser	cac His	att Ile	8364
gca Ala	att Ile 2750	gtc Val	ttt Phe	gat Asp	gac Asp	acc Thr 2755	aaa Lys	gtt Val	aaa Lys	aac Asn	cgc Arg 2760	ctc Leu	acc Thr	att Ile	8409
gag Glu	ctg Leu 2765	gag Glu	gta Val	cga Arg	act Thr	gaa Glu 2770	gct Ala	gaa Glu	tca Ser	ggc Gly	ttg Leu 2775	ctc Leu	ttc Phe	tac Tyr	8454
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aat Asn	ggg Gly 2795	ttc Phe	ccg Pro	ttc Phe	ttc Phe	agt Ser 2800	tat Tyr	gat Asp	ttg Leu	ggg Gly	agt Ser 2805	ggg Gly	agc Ser	acc Thr	8544
aga Arg	acc Thr 2810	atg Met	atc Ile	ccc Pro	aca Thr	aaa Lys 2815	atc Ile	aac Asn	gat Asp	ggt Gly	cag Gln 2820	tgg Trp	cac His	aag Lys	8589
att Ile	aag Lys 2825	att Ile	gtg Val	aga Arg	gtg Val	aag Lys 2830	cag Gln	gag Glu	gga Gly	att Ile	ctt Leu 2835	tat Tyr	gtg Val	gat Asp	8634
gat Asp	gcc Ala 2840	tcc Ser	agc Ser	caa Gln	acc Thr	atc Ile 2845	agt Ser	ccc Pro	aag Lys	aaa Lys	gcc Ala 2850	gac Asp	atc Ile	ctg Leu	8679

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gat Asp	gtc Val 2855	ggg Gly	ggg Gly	att Ile	ctg Leu	tat Tyr 2860	gtc Val	ggt Gly	gga Gly	ttg Leu	ccg Pro 2865	atc Ile	aac Asn	tat Tyr	8724
acc Thr	aca Thr 2870	cgc Arg	aga Arg	att Ile	ggt Gly	cca Pro 2875	gtg Val	act Thr	tac Tyr	agc Ser	ctg Leu 2880	gat Asp	ggc Gly	tgt Cys	8769
gtt Val	agg Arg 2885	aat Asn	ctt Leu	cac His	atg Met	gaa Glu 2890	caa Gln	gcc Ala	cct Pro	gtt Val	gat Asp 2895	ctg Leu	gac Asp	cag Gln	8814
cct Pro	acc Thr 2900	tcc Ser	agc Ser	ttt Phe	cac His	gtt Val 2905	ggg Gly	aca Thr	tgc Cys	ttt Phe	gcg Ala 2910	aat Asn	gca Ala	gag Glu	8859
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cac His	gtg Val 2975	gat Asp	aat Asn	ggc Gly	gct Ala	ggc Gly 2980	cga Arg	ttc Phe	act Thr	gca Ala	att Ile 2985	tat Tyr	gat Asp	gct Ala	9084
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tct Ser	ctg Leu 3065	aag Lys	ctc Leu	acc Thr	aaa Lys	ggc Gly 3070	act Thr	gca Ala	aac Asn	cgc Arg	tggt Trp 3075	agg Arg	tta Leu	att Ile	9354
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3080

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<211> 3084
<212> PRT
<213> Mus musculus

<400> 6

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Gly Glu Lys Gly Pro Glu Met Tyr Cys Lys Leu Val Glu His Val Pro
35 40 45

Gly Gln Pro Val Arg Asn Pro Gln Cys Arg Ile Cys Asn Gln Asn Ser
50 55 60

Ser Asn Pro Tyr Gln Arg His Pro Ile Thr Asn Ala Ile Asp Gly Lys
65 70 75 80

Asn Thr Trp Trp Gln Ser Pro Ser Ile Lys Asn Gly Val Glu Tyr His
85 90 95

Tyr Val Thr Ile Thr Leu Asp Leu Gln Gln Val Phe Gln Ile Ala Tyr
100 105 110

Val Ile Val Lys Ala Ala Asn Ser Pro Arg Pro Gly Asn Trp Ile Leu
115 120 125

Glu Arg Ser Leu Asp Asp Val Glu Tyr Lys Pro Trp Gln Tyr His Ala
130 135 140

Val Thr Asp Thr Glu Cys Leu Thr Leu Tyr Asn Ile Tyr Pro Arg Thr
145 150 155 160

Gly Pro Pro Ser Tyr Ala Lys Asp Asp Glu Val Ile Cys Thr Ser Phe
165 170 175

Tyr Ser Lys Ile His Pro Leu Glu Asn Gly Glu Ile His Ile Ser Leu
180 185 190

Ile Asn Gly Arg Pro Ser Ala Asp Asp Pro Ser Pro Glu Leu Leu Glu
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195

Phe Thr Ser Ala Arg Tyr Ile Arg Leu Arg Phe Gln Arg Ile Arg Thr
210 215 220

Leu Asn Ala Asp Leu Met Met Phe Ala His Lys Asp Pro Arg Glu Ile
225 230 235 240

Asp Pro Ile Val Thr Arg Arg Tyr Tyr Tyr Ser Val Lys Asp Ile Ser
245 250 255

Val Gly Gly Met Cys Ile Cys Tyr Gly His Ala Arg Ala Cys Pro Leu
260 265 270

Asp Pro Ala Thr Asn Lys Ser Arg Cys Glu Cys Glu His Asn Thr Cys
275 280 285

Gly Glu Ser Cys Asp Arg Cys Cys Pro Gly Phe His Gln Lys Pro Trp
290 295 300

Arg Ala Gly Thr Phe Leu Thr Lys Ser Glu Cys Glu Ala Cys Asn Cys
305 310 315 320

His Gly Lys Ala Glu Glu Cys Tyr Tyr Asp Glu Thr Val Ala Ser Arg
325 330 335

Asn Leu Ser Leu Asn Ile His Gly Lys Tyr Ile Gly Gly Gly Val Cys
340 345 350

Ile Asn Cys Thr His Asn Thr Ala Gly Ile Asn Cys Glu Thr Cys Val
355 360 365

Asp Gly Phe Phe Arg Pro Lys Gly Val Ser Pro Asn Tyr Pro Arg Pro
370 375 380

Cys Gln Pro Cys His Cys Asp Pro Thr Gly Ser Leu Ser Glu Val Cys
385 390 395 400

Val Lys Asp Glu Lys Tyr Ala Gln Arg Gly Leu Lys Pro Gly Ser Cys
405 410 415

His Cys Lys Thr Gly Phe Gly Gly Val Asn Cys Asp Arg Cys Val Arg
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Gly Tyr His Gly Tyr Pro Asp Cys Gln Pro Cys Asn Cys Ser Gly Leu
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Gly Ser Thr Asn Glu Asp Pro Cys Val Gly Pro Cys Ser Cys Lys Glu
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Asn Val Glu Gly Glu Asp Cys Ser Arg Cys Lys Ser Gly Phe Phe Asn
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Leu Gln Glu Asp Asn Gln Lys Gly Cys Glu Glu Cys Phe Cys Ser Gly
485 490 495

Val Ser Asn Arg Cys Gln Ser Ser Tyr Trp Thr Tyr Gly Asn Ile Gln
500 505 510

Asp Met Arg Gly Trp Tyr Leu Thr Asp Leu Ser Gly Arg Ile Arg Met
515 520 525

Ala Pro Gln Leu Asp Asn Pro Asp Ser Pro Gln Gln Ile Ser Ile Ser
530 535 540

Asn Ser Glu Ala Arg Lys Ser Leu Leu Asp Gly Tyr Tyr Trp Ser Ala
545 550 555 560

Pro Pro Pro Tyr Leu Gly Asn Arg Leu Pro Ala Val Gly Gly Gln Leu
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Ser Phe Thr Ile Ser Tyr Asp Leu Glu Glu Glu Glu Asp Asp Thr Glu
580 585 590

Lys Leu Leu Gln Leu Met Ile Ile Phe Glu Gly Asn Asp Leu Arg Ile
595 600 605

Ser Thr Ala Tyr Lys Glu Val Tyr Leu Glu Pro Ser Glu Glu His Val
610 615 620

Glu Glu Val Ser Leu Lys Glu Glu Ala Phe Thr Ile His Gly Thr Asn
625 630 635 640

Leu Pro Val Thr Arg Lys Asp Phe Met Ile Val Leu Thr Asn Leu Gly
645 650 655

Glu Ile Leu Ile Gln Ile Thr Tyr Asn Leu Gly Met Asp Ala Ile Phe
660 665 670

Arg Leu Ser Ser Val Asn Leu Glu Ser Pro Val Pro Tyr Pro Thr Asp
675 680 685

Arg Arg Ile Ala Thr Asp Val Glu Val Cys Gln Cys Pro Pro Gly Tyr
690 695 700

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Ser Gly Ser Ser Cys Glu Thr Cys Trp Pro Arg His Arg Arg Val Asn
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Gly Thr Ile Phe Gly Gly Ile Cys Glu Pro Cys Gln Cys Phe Ala His
725 730 735

Ala Glu Ala Cys Asp Asp Ile Thr Gly Glu Cys Leu Asn Cys Lys Asp
740 745 750

His Thr Gly Gly Pro Tyr Cys Asn Glu Cys Leu Pro Gly Phe Tyr Gly
755 760 765

Asp Pro Thr Arg Gly Ser Pro Glu Asp Cys Gln Pro Cys Ala Cys Pro
770 775 780

Leu Asn Ile Pro Ser Asn Asn Phe Ser Pro Thr Cys His Leu Asp Arg
785 790 795 800

Ser Leu Gly Leu Ile Cys Asp Glu Cys Pro Ile Gly Tyr Thr Gly Pro
805 810 815

Arg Cys Glu Arg Cys Ala Glu Gly Tyr Phe Gly Gln Pro Ser Val Pro
820 825 830

Gly Gly Ser Cys Gln Pro Cys Gln Cys Asn Asp Asn Leu Asp Tyr Ser
835 840 845

Ile Pro Gly Ser Cys Asp Ser Leu Ser Gly Ser Cys Leu Ile Cys Lys
850 855 860

Pro Gly Thr Thr Gly Arg Tyr Cys Glu Leu Cys Ala Asp Gly Tyr Phe
865 870 875 880

Gly Asp Ala Val Asn Thr Lys Asn Cys Gln Pro Cys Arg Cys Asp Ile
885 890 895

Asn Gly Ser Phe Ser Glu Asp Cys His Thr Arg Thr Gly Gln Cys Glu
900 905 910

Cys Arg Pro Asn Val Gln Gly Arg His Cys Asp Glu Cys Lys Pro Glu
915 920 925

Thr Phe Gly Leu Gln Leu Gly Arg Gly Cys Leu Pro Cys Asn Cys Asn
930 935 940

Ser Phe Gly Ser Lys Ser Phe Asp Cys Glu Ala Ser Gly Gln Cys Trp
945 950 955 960

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Cys Gln Pro Gly Val Ala Gly Lys Lys Cys Asp Arg Cys Ala His Gly
 965 970 975
 Tyr Phe Asn Phe Gln Glu Gly Gly Cys Ile Ala Cys Asp Cys Ser His
 980 985 990
 Leu Gly Asn Asn Cys Asp Pro Lys Thr Gly Gln Cys Ile Cys Pro Pro
 995 1000 1005
 Asn Thr Thr Gly Glu Lys Cys Ser Glu Cys Leu Pro Asn Thr Trp
 1010 1015 1020
 Gly His Ser Ile Val Thr Gly Cys Lys Val Cys Asn Cys Ser Thr
 1025 1030 1035
 Val Gly Ser Leu Ala Ser Gln Cys Asn Val Asn Thr Gly Gln Cys
 1040 1045 1050
 Ser Cys His Pro Lys Phe Ser Gly Met Lys Cys Ser Glu Cys Ser
 1055 1060 1065
 Arg Gly His Trp Asn Tyr Pro Leu Cys Thr Leu Cys Asp Cys Phe
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 Leu Pro Gly Thr Asp Ala Thr Thr Cys Asp Leu Glu Thr Arg Lys
 1085 1090 1095
 Cys Ser Cys Ser Asp Gln Thr Gly Gln Cys Ser Cys Lys Val Asn
 1100 1105 1110
 Val Glu Gly Val His Cys Asp Arg Cys Arg Pro Gly Lys Phe Gly
 1115 1120 1125
 Leu Asp Ala Lys Asn Pro Leu Gly Cys Ser Ser Cys Tyr Cys Phe
 1130 1135 1140
 Gly Val Thr Ser Gln Cys Ser Glu Ala Lys Gly Leu Ile Arg Thr
 1145 1150 1155
 Trp Val Thr Leu Ser Asp Glu Gln Thr Ile Leu Pro Leu Val Asp
 1160 1165 1170
 Glu Ala Leu Gln His Thr Thr Thr Lys Gly Ile Ala Phe Gln Lys
 1175 1180 1185

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Pro Glu Ile Val Ala Lys Met Asp Glu Val Arg Gln Glu Leu His
1190 1195 1200

Leu Glu Pro Phe Tyr Trp Lys Leu Pro Gln Gln Phe Glu Gly Lys
1205 1210 1215

Lys Leu Met Ala Tyr Gly Gly Lys Leu Lys Tyr Ala Ile Tyr Phe
1220 1225 1230

Glu Ala Arg Asp Glu Thr Gly Phe Ala Thr Tyr Lys Pro Gln Val
1235 1240 1245

Ile Ile Arg Gly Gly Thr Pro Thr His Ala Arg Ile Ile Thr Arg
1250 1255 1260

His Met Ala Ala Pro Leu Ile Gly Gln Leu Thr Arg His Glu Ile
1265 1270 1275

Glu Met Thr Glu Lys Glu Trp Lys Tyr Tyr Gly Asp Asp Pro Arg
1280 1285 1290

Ile Ser Arg Thr Val Thr Arg Glu Asp Phe Leu Asp Ile Leu Tyr
1295 1300 1305

Asp Ile His Tyr Ile Leu Ile Lys Ala Thr Tyr Gly Asn Val Val
1310 1315 1320

Arg Gln Ser Arg Ile Ser Glu Ile Ser Met Glu Val Ala Glu Pro
1325 1330 1335

Gly His Val Leu Ala Gly Ser Pro Pro Ala His Leu Ile Glu Arg
1340 1345 1350

Cys Asp Cys Pro Pro Gly Tyr Ser Gly Leu Ser Cys Glu Thr Cys
1355 1360 1365

Ala Pro Gly Phe Tyr Arg Leu Arg Ser Glu Pro Gly Gly Arg Thr
1370 1375 1380

Pro Gly Pro Thr Leu Gly Thr Cys Val Pro Cys Gln Cys Asn Gly
1385 1390 1395

His Ser Ser Gln Cys Asp Pro Glu Thr Ser Val Cys Gln Asn Cys
1400 1405 1410

Gln His His Thr Ala Gly Asp Phe Cys Glu Arg Cys Ala Leu Gly
1415 1420 1425

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Tyr Tyr Gly Ile Val Arg Gly Leu Pro Asn Asp Cys Gln Pro Cys
 1430 1435 1440
 Ala Cys Pro Leu Ile Ser Pro Ser Asn Asn Phe Ser Pro Ser Cys
 1445 1450 1455
 Val Leu Glu Gly Leu Glu Asp Tyr Arg Cys Thr Ala Cys Pro Arg
 1460 1465 1470
 Gly Tyr Glu Gly Gln Tyr Cys Glu Arg Cys Ala Pro Gly Tyr Thr
 1475 1480 1485
 Gly Ser Pro Ser Ser Pro Gly Gly Ser Cys Gln Glu Cys Glu Cys
 1490 1495 1500
 Asp Pro Tyr Gly Ser Leu Pro Val Pro Cys Asp Arg Val Thr Gly
 1505 1510 1515
 Leu Cys Thr Cys Arg Pro Gly Ala Thr Gly Arg Lys Cys Asp Gly
 1520 1525 1530
 Cys Glu His Trp His Ala Arg Glu Gly Ala Glu Cys Val Phe Cys
 1535 1540 1545
 Gly Asp Glu Cys Thr Gly Leu Leu Leu Gly Asp Leu Ala Arg Leu
 1550 1555 1560
 Glu Gln Met Thr Met Asn Ile Asn Leu Thr Gly Pro Leu Pro Ala
 1565 1570 1575
 Pro Tyr Lys Ile Leu Tyr Gly Leu Glu Asn Thr Thr Gln Glu Leu
 1580 1585 1590
 Lys His Leu Leu Ser Pro Gln Arg Ala Pro Glu Arg Leu Ile Gln
 1595 1600 1605
 Leu Ala Glu Gly Asn Val Asn Thr Leu Val Met Glu Thr Asn Glu
 1610 1615 1620
 Leu Leu Thr Arg Ala Thr Lys Val Thr Ala Asp Gly Glu Gln Thr
 1625 1630 1635
 Gly Gln Asp Ala Glu Arg Thr Asn Ser Arg Ala Glu Ser Leu Glu
 1640 1645 1650
 Glu Phe Ile Lys Gly Leu Val Gln Asp Ala Glu Ala Ile Asn Glu
 1655 1660 1665

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Lys	Ala	Val	Lys	Leu	Asn	Glu	Thr	Leu	Gly	Asn	Gln	Asp	Lys	Thr
1670						1675					1680			
Ala	Glu	Arg	Asn	Leu	Glu	Glu	Leu	Gln	Lys	Glu	Ile	Asp	Arg	Met
1685						1690					1695			
Leu	Lys	Glu	Leu	Arg	Ser	Lys	Asp	Leu	Gln	Thr	Gln	Lys	Glu	Val
1700						1705					1710			
Ala	Glu	Asp	Glu	Leu	Val	Ala	Ala	Glu	Gly	Leu	Leu	Lys	Arg	Val
1715						1720					1725			
Asn	Lys	Leu	Phe	Gly	Glu	Pro	Arg	Ala	Gln	Asn	Glu	Asp	Met	Glu
1730						1735					1740			
Lys	Asp	Leu	Gln	Gln	Lys	Leu	Ala	Glu	Tyr	Lys	Asn	Lys	Leu	Asp
1745						1750					1755			
Asp	Ala	Trp	Asp	Leu	Leu	Arg	Glu	Ala	Thr	Asp	Lys	Thr	Arg	Asp
1760						1765					1770			
Ala	Asn	Arg	Leu	Ser	Ala	Ala	Asn	Gln	Lys	Asn	Met	Thr	Ile	Leu
1775						1780					1785			
Glu	Thr	Lys	Lys	Glu	Ala	Ile	Glu	Gly	Ser	Lys	Arg	Gln	Ile	Glu
1790						1795					1800			
Asn	Thr	Leu	Lys	Glu	Gly	Asn	Asp	Ile	Leu	Asp	Glu	Ala	Asn	Gln
1805						1810					1815			
Leu	Leu	Gly	Glu	Ile	Asn	Ser	Val	Ile	Asp	Tyr	Val	Asp	Asp	Ile
1820						1825					1830			
Lys	Thr	Lys	Leu	Pro	Pro	Met	Ser	Glu	Glu	Leu	Ser	Asp	Lys	Ile
1835						1840					1845			
Asp	Asp	Leu	Ala	Gln	Glu	Ile	Lys	Asp	Arg	Arg	Leu	Ala	Glu	Lys
1850						1855					1860			
Val	Phe	Gln	Ala	Glu	Ser	His	Ala	Ala	Gln	Leu	Asn	Asp	Ser	Ser
1865						1870					1875			
Ala	Val	Leu	Asp	Gly	Ile	Leu	Asp	Glu	Ala	Lys	Asn	Ile	Ser	Phe
1880						1885					1890			
Asn	Ala	Thr	Ala	Ala	Phe	Arg	Ala	Tyr	Ser	Asn	Ile	Lys	Asp	Tyr

1895

Ile	Asp	Glu	Ala	Glu	Lys	Val	Ala	Arg	Glu	Ala	Lys	Glu	Leu	Ala
	1910					1915					1920			
Gln	Gly	Ala	Thr	Lys	Leu	Ala	Thr	Ser	Pro	Gln	Gly	Leu	Leu	Lys
	1925					1930					1935			
Glu	Asp	Ala	Lys	Gly	Ser	Leu	Gln	Lys	Ser	Phe	Arg	Ile	Leu	Asn
	1940					1945					1950			
Glu	Ala	Lys	Lys	Leu	Ala	Asn	Asp	Val	Lys	Gly	Asn	His	Asn	Asp
	1955					1960					1965			
Leu	Asn	Asp	Leu	Lys	Thr	Arg	Leu	Glu	Thr	Ala	Asp	Leu	Arg	Asn
	1970					1975					1980			
Ser	Gly	Leu	Leu	Gly	Ala	Leu	Asn	Asp	Thr	Met	Asp	Lys	Leu	Ser
	1985					1990					1995			
Ala	Ile	Thr	Asn	Asp	Thr	Ala	Ala	Lys	Leu	Gln	Ala	Val	Lys	Glu
	2000					2005					2010			
Lys	Ala	Arg	Glu	Ala	Asn	Asp	Thr	Ala	Lys	Ala	Val	Leu	Ala	Gln
	2015					2020					2025			
Val	Lys	Asp	Leu	His	Gln	Asn	Leu	Asp	Gly	Leu	Lys	Gln	Asn	Tyr
	2030					2035					2040			
Asn	Lys	Leu	Ala	Asp	Ser	Val	Ala	Lys	Thr	Asn	Ala	Val	Val	Lys
	2045					2050					2055			
Asp	Pro	Ser	Lys	Asn	Lys	Ile	Ile	Ala	Asp	Ala	Gly	Thr	Ser	Val
	2060					2065					2070			
Arg	Asn	Leu	Glu	Gln	Glu	Ala	Asp	Arg	Leu	Ile	Asp	Lys	Leu	Lys
	2075					2080					2085			
Pro	Ile	Lys	Glu	Leu	Glu	Asp	Asn	Leu	Lys	Lys	Asn	Ile	Ser	Glu
	2090					2095					2100			
Ile	Lys	Glu	Leu	Ile	Asn	Gln	Ala	Arg	Lys	Gln	Ala	Asn	Ser	Ile
	2105					2110					2115			
Lys	Val	Ser	Val	Ser	Ser	Gly	Gly	Asp	Cys	Val	Arg	Thr	Tyr	Arg
	2120					2125					2130			

Pro Glu Ile Lys Lys Gly Ser Tyr Asn Asn Ile Val Val His Val
2135 2140 2145

Lys Thr Ala Val Ala Asp Asn Leu Leu Phe Tyr Leu Gly Ser Ala
2150 2155 2160

Lys Phe Ile Asp Phe Leu Ala Ile Glu Met Arg Lys Gly Lys Val
2165 2170 2175

Ser Phe Leu Trp Ile Val Gly Ser Gly Val Gly Arg Val Gly Phe
2180 2185 2190

Pro Asp Leu Thr Ile Asp Asp Ser Tyr Trp Tyr Arg Ile Glu Ala
2195 2200 2205

Ser Arg Thr Gly Arg Asn Gly Ser Ile Ser Val Arg Ala Leu Asp
2210 2215 2220

Gly Pro Lys Ala Ser Met Val Pro Ser Thr Tyr His Ser Val Ser
2225 2230 2235

Pro Pro Gly Tyr Thr Ile Leu Asp Val Asp Ala Asn Ala Met Leu
2240 2245 2250

Phe Val Gly Gly Leu Thr Gly Lys Ile Lys Lys Ala Asp Ala Val
2255 2260 2265

Arg Val Ile Thr Phe Thr Gly Cys Met Gly Glu Thr Tyr Phe Asp
2270 2275 2280

Asn Lys Pro Ile Gly Leu Trp Asn Phe Arg Glu Lys Glu Gly Asp
2285 2290 2295

Cys Lys Gly Cys Thr Val Ser Pro Gln Val Glu Asp Ser Glu Gly
2300 2305 2310

Thr Ile Gln Phe Asp Gly Glu Gly Tyr Ala Leu Val Ser Arg Pro
2315 2320 2325

Ile Arg Trp Tyr Pro Asn Ile Ser Thr Val Met Phe Lys Phe Arg
2330 2335 2340

Thr Phe Ser Ser Ser Ala Leu Leu Met Tyr Leu Ala Thr Arg Asp
2345 2350 2355

Leu Lys Asp Phe Met Ser Val Glu Leu Ser Asp Gly His Val Lys
2360 2365 2370

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Val	Ser	Tyr	Asp	Leu	Gly	Ser	Gly	Met	Thr	Ser	Val	Val	Ser	Asn
	2375					2380					2385			
Gln	Asn	His	Asn	Asp	Gly	Lys	Trp	Lys	Ala	Phe	Thr	Leu	Ser	Arg
	2390					2395					2400			
Ile	Gln	Lys	Gln	Ala	Asn	Ile	Ser	Ile	Val	Asp	Ile	Asp	Ser	Asn
	2405					2410					2415			
Gln	Glu	Glu	Asn	Val	Ala	Thr	Ser	Ser	Ser	Gly	Asn	Asn	Phe	Gly
	2420					2425					2430			
Leu	Asp	Leu	Lys	Ala	Asp	Asp	Lys	Ile	Tyr	Phe	Gly	Gly	Leu	Pro
	2435					2440					2445			
Thr	Leu	Arg	Asn	Leu	Ser	Met	Lys	Ala	Arg	Pro	Glu	Val	Asn	Val
	2450					2455					2460			
Lys	Lys	Tyr	Ser	Gly	Cys	Leu	Lys	Asp	Ile	Glu	Ile	Ser	Arg	Thr
	2465					2470					2475			
Pro	Tyr	Asn	Ile	Leu	Ser	Ser	Pro	Asp	Tyr	Val	Gly	Val	Thr	Lys
	2480					2485					2490			
Gly	Cys	Ser	Leu	Glu	Asn	Val	Asn	Thr	Val	Ser	Phe	Pro	Lys	Pro
	2495					2500					2505			
Gly	Phe	Val	Glu	Leu	Ala	Ala	Val	Ser	Ile	Asp	Val	Gly	Thr	Glu
	2510					2515					2520			
Ile	Asn	Leu	Ser	Phe	Ser	Thr	Arg	Asn	Glu	Ser	Gly	Ile	Ile	Leu
	2525					2530					2535			
Leu	Gly	Ser	Gly	Gly	Thr	Leu	Thr	Pro	Pro	Arg	Arg	Lys	Arg	Arg
	2540					2545					2550			
Gln	Thr	Thr	Gln	Ala	Tyr	Tyr	Ala	Ile	Phe	Leu	Asn	Lys	Gly	Arg
	2555					2560					2565			
Leu	Glu	Val	His	Leu	Ser	Ser	Gly	Thr	Arg	Thr	Met	Arg	Lys	Ile
	2570					2575					2580			
Val	Ile	Lys	Pro	Glu	Pro	Asn	Leu	Phe	His	Asp	Gly	Arg	Glu	His
	2585					2590					2595			
Ser	Val	His	Val	Glu	Arg	Thr	Arg	Gly	Ile	Phe	Thr	Val	Gln	Ile
	2600					2605					2610			

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Asp	Glu	Asp	Arg	Arg	His	Ile	Gln	Asn	Leu	Thr	Glu	Glu	Gln	Pro
2615						2620					2625			
Ile	Glu	Val	Lys	Lys	Leu	Phe	Val	Gly	Gly	Ala	Pro	Pro	Glu	Phe
2630						2635					2640			
Gln	Pro	Ser	Pro	Leu	Arg	Asn	Ile	Pro	Ala	Phe	Gln	Gly	Cys	Val
2645						2650					2655			
Trp	Asn	Leu	Val	Ile	Asn	Ser	Ile	Pro	Met	Asp	Phe	Ala	Gln	Pro
2660						2665					2670			
Ile	Ala	Phe	Lys	Asn	Ala	Asp	Ile	Gly	Arg	Cys	Thr	Tyr	Gln	Lys
2675						2680					2685			
Pro	Arg	Glu	Asp	Glu	Ser	Glu	Ala	Val	Pro	Ala	Glu	Val	Ile	Val
2690						2695					2700			
Gln	Pro	Gln	Ser	Val	Pro	Thr	Pro	Ala	Phe	Pro	Phe	Pro	Val	Pro
2705						2710					2715			
Thr	Met	Val	His	Gly	Pro	Cys	Val	Ala	Glu	Ser	Glu	Pro	Ala	Leu
2720						2725					2730			
Leu	Thr	Gly	Ser	Lys	Gln	Phe	Gly	Leu	Ser	Arg	Asn	Ser	His	Ile
2735						2740					2745			
Ala	Ile	Val	Phe	Asp	Asp	Thr	Lys	Val	Lys	Asn	Arg	Leu	Thr	Ile
2750						2755					2760			
Glu	Leu	Glu	Val	Arg	Thr	Glu	Ala	Glu	Ser	Gly	Leu	Leu	Phe	Tyr
2765						2770					2775			
Met	Gly	Arg	Ile	Asn	His	Ala	Asp	Phe	Gly	Thr	Val	Gln	Leu	Arg
2780						2785					2790			
Asn	Gly	Phe	Pro	Phe	Phe	Ser	Tyr	Asp	Leu	Gly	Ser	Gly	Ser	Thr
2795						2800					2805			
Arg	Thr	Met	Ile	Pro	Thr	Lys	Ile	Asn	Asp	Gly	Gln	Trp	His	Lys
2810						2815					2820			
Ile	Lys	Ile	Val	Arg	Val	Lys	Gln	Glu	Gly	Ile	Leu	Tyr	Val	Asp
2825						2830					2835			
Asp	Ala	Ser	Ser	Gln	Thr	Ile	Ser	Pro	Lys	Lys	Ala	Asp	Ile	Leu

2840

Asp	Val	Gly	Gly	Ile	Leu	Tyr	Val	Gly	Gly	Leu	Pro	Ile	Asn	Tyr
2855						2860					2865			
Thr	Thr	Arg	Arg	Ile	Gly	Pro	Val	Thr	Tyr	Ser	Leu	Asp	Gly	Cys
2870						2875					2880			
Val	Arg	Asn	Leu	His	Met	Glu	Gln	Ala	Pro	Val	Asp	Leu	Asp	Gln
2885						2890					2895			
Pro	Thr	Ser	Ser	Phe	His	Val	Gly	Thr	Cys	Phe	Ala	Asn	Ala	Glu
2900						2905					2910			
Ser	Gly	Thr	Tyr	Phe	Asp	Gly	Thr	Gly	Phe	Gly	Lys	Ala	Val	Gly
2915						2920					2925			
Gly	Phe	Ile	Val	Gly	Leu	Asp	Leu	Leu	Val	Glu	Phe	Glu	Phe	Arg
2930						2935					2940			
Thr	Thr	Arg	Pro	Thr	Gly	Val	Leu	Leu	Gly	Ile	Ser	Ser	Gln	Lys
2945						2950					2955			
Met	Asp	Gly	Met	Gly	Ile	Glu	Met	Ile	Asp	Glu	Lys	Leu	Met	Phe
2960						2965					2970			
His	Val	Asp	Asn	Gly	Ala	Gly	Arg	Phe	Thr	Ala	Ile	Tyr	Asp	Ala
2975						2980					2985			
Glu	Ile	Pro	Gly	His	Met	Cys	Asn	Gly	Gln	Trp	Tyr	Lys	Val	Thr
2990						2995					3000			
Ala	Lys	Lys	Ile	Lys	Asn	Arg	Leu	Glu	Leu	Val	Val	Asp	Gly	Asn
3005						3010					3015			
Gln	Val	Asp	Ala	Gln	Ser	Pro	Asn	Ser	Ala	Ser	Thr	Ser	Ala	Asp
3020						3025					3030			
Thr	Asn	Asp	Pro	Val	Phe	Val	Gly	Gly	Phe	Pro	Gly	Gly	Leu	Asn
3035						3040					3045			
Gln	Phe	Gly	Leu	Thr	Thr	Asn	Ile	Arg	Phe	Arg	Gly	Cys	Ile	Arg
3050						3055					3060			
Ser	Leu	Lys	Leu	Thr	Lys	Gly	Thr	Ala	Asn	Arg	Trp	Arg	Leu	Ile
3065						3070					3075			

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Leu Pro Arg Pro Trp Asn
3080

<210> 7
<211> 5583
<212> DNA
<213> Mus musculus

<220>
<221> CDS
<222> (42)..(5441)
<223> laminin, beta 2

<400> 7
ccacgcgtcc gggacaccag cccagtagcc acacggtcgg g atg gag tgg gcc tca 56
Met Glu Trp Ala Ser
1 5

gga gaa cca ggg agg ggc agg cag gga cag cct ttg cca tgg gaa ctt 104
Gly Glu Pro Gly Arg Gly Arg Gln Gly Gln Pro Leu Pro Trp Glu Leu
10 15 20

cgc ttg ggc cta ctt cta agt gtg ctg gct gcc aca ttg gcc cag gcc 152
Arg Leu Gly Leu Leu Leu Ser Val Leu Ala Ala Thr Leu Ala Gln Ala
25 30 35

ccg tcc ttg gat gta cct ggc tgt tct cga gga agc tgc tat cca gcc 200
Pro Ser Leu Asp Val Pro Gly Cys Ser Arg Gly Ser Cys Tyr Pro Ala
40 45 50

acc ggt gac ctg ttg gtg ggc cgt gcg gac aga ctg acg gcc tca tcc 248
Thr Gly Asp Leu Leu Val Gly Arg Ala Asp Arg Leu Thr Ala Ser Ser
55 60 65

acg tgt ggc ttg cat agc cct caa ccc tac tgt att gtc agt cac ctg 296
Thr Cys Gly Leu His Ser Pro Gln Pro Tyr Cys Ile Val Ser His Leu
70 75 80 85

cag gac gaa aag aag tgt ttc ctg tgt gac tcc cga cgt ccc ttc tct 344
Gln Asp Glu Lys Lys Cys Phe Leu Cys Asp Ser Arg Arg Pro Phe Ser
90 95 100

gct cga gac aac cca aat agt cat cgg atc cag aat gta gtc acc agc 392
Ala Arg Asp Asn Pro Asn Ser His Arg Ile Gln Asn Val Val Thr Ser
105 110 115

ttt gcg cca caa cgc cgg acg gcc tgg tgg caa tcg gag aac ggg gtt 440
Phe Ala Pro Gln Arg Arg Thr Ala Trp Trp Gln Ser Glu Asn Gly Val
120 125 130

cca atg gtc acc atc caa ctg gac ctg gaa gct gag ttt cat ttc acc 488
Pro Met Val Thr Ile Gln Leu Asp Leu Glu Ala Glu Phe His Phe Thr
135 140 145

cac ctc att atg acg ttc aag acg ttc cgg cct gct gct atg ctg gtg 536
His Leu Ile Met Thr Phe Lys Thr Phe Arg Pro Ala Ala Met Leu Val
150 155 160 165

gag cgt tct gca gac ttt ggc cgc acc tgg cac gtg tac cga tat ttt 584
Glu Arg Ser Ala Asp Phe Gly Arg Thr Trp His Val Tyr Arg Tyr Phe
170 175 180 185

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170	175	180	
tcc tat gac tgc ggg gct gac ttc ccg gga atc cca ctg gcc ccg cca Ser Tyr Asp Cys Gly Ala Asp Phe Pro Gly Ile Pro Leu Ala Pro Pro	185	190	195
632			
cg t cgc tgg gat gat gta gtg tgt gag tcc cgc tac tca gaa atc gag Arg Arg Trp Asp Asp Val Val Cys Glu Ser Arg Tyr Ser Glu Ile Glu	200	205	210
680			
ccg tct acg gaa ggc gag gtc atc tat cgt gtg ctg gac cct gct att Pro Ser Thr Glu Gly Glu Val Ile Tyr Arg Val Leu Asp Pro Ala Ile	215	220	225
728			
cct atc cca gac ccc tac agc tca cgg att cag aac ctg ttg aag atc Pro Ile Pro Asp Pro Tyr Ser Ser Arg Ile Gln Asn Leu Leu Lys Ile	230	235	240
776			
acc aac cta cga gtg aac tta acc cgg ctt cac aca ctg gga gac aac Thr Asn Leu Arg Val Asn Leu Thr Arg Leu His Thr Leu Gly Asp Asn	250	255	260
824			
ttg ctt gac cca cgg agg gag atc cgg gaa aaa tac tat tat gct ctc Leu Leu Asp Pro Arg Arg Glu Ile Arg Glu Lys Tyr Tyr Tyr Ala Leu	265	270	275
872			
tat gaa ctt gtc atc cgt ggc aac tgc ttc tgc tat ggc cac gcc tca Tyr Glu Leu Val Ile Arg Gly Asn Cys Phe Cys Tyr Gly His Ala Ser	280	285	290
920			
cag tgt gcg cct gca cca ggg gcg ccg gcc cat gct gag ggc atg gta Gln Cys Ala Pro Ala Pro Gly Ala Pro Ala His Ala Glu Gly Met Val	295	300	305
968			
cac gga gcc tgt atc tgc aag cac aat act cgt gga ctc aac tgt gag His Gly Ala Cys Ile Cys Lys His Asn Thr Arg Gly Leu Asn Cys Glu	310	315	320
1016			
cag tgt cag gat ttc tat cag gac ctt ccc tgg cac cct gca gag gac Gln Cys Gln Asp Phe Tyr Gln Asp Leu Pro Trp His Pro Ala Glu Asp	330	335	340
1064			
ggc cat act cac gcc tgt cgg aag tgt gag tgc aac ggc cat act cat Gly His Thr His Ala Cys Arg Lys Cys Glu Cys Asn Gly His Thr His	345	350	355
1112			
agc tgc cac ttt gac atg gct gtc tac ctg gca tct gga aat gta agt Ser Cys His Phe Asp Met Ala Val Tyr Leu Ala Ser Gly Asn Val Ser	360	365	370
1160			
gga ggc gta tgc gat ggg tgt cag cac aac aca gct ggc cgc cat tgt Gly Gly Val Cys Asp Gly Cys Gln His Asn Thr Ala Gly Arg His Cys	375	380	385
1208			
gag ttc tgc cgg ccc ttc ttc tac cgt gag ccc acc aag gac atg cgg Glu Phe Cys Arg Pro Phe Phe Tyr Arg Asp Pro Thr Lys Asp Met Arg	390	395	400
1256			
gac cca gct gtg tgc cgt cct tgt gag tgt gag cct atg ggt tct caa Asp Pro Ala Val Cys Arg Pro Cys Asp Cys Asp Pro Met Gly Ser Gln	410	415	420
1304			
gat ggt ggt cgc tgt gat tct cat gat gag cct gtg cta gga ctg gtc			
1352			

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Asp	Gly	Gly	Arg 425	Cys	Asp	Ser	His	Asp 430	Asp	Pro	Val	Leu	Gly 435	Leu	Val	
tca Ser	ggc Gly	cag Gln 440	tgt Cys	cgc Arg	tgc Cys	aaa Lys	gaa Glu 445	cac His	gtg Val	gtt Val	ggc Gly	act Thr 450	cgc Arg	tgc Cys	cag Gln	1400
caa Gln	tgc Cys 455	cgt Arg	gat Asp	ggc Gly	ttc Phe	ttt Phe 460	gga Gly	ctt Leu	agt Ser	gcc Ala	agt Ser 465	gac Asp	cct Pro	cga Arg	ggg Gly	1448
tgc Cys 470	cag Gln	cgt Arg	tgc Cys	cag Gln	tgt Cys 475	aat Asn	tca Ser	cgg Arg	ggc Gly	aca Thr 480	gtg Val	cct Pro	ggg Gly	agc Ser	tcc Ser 485	1496
cct Pro	tgt Cys	gac Asp	tcc Ser	agt Ser 490	agt Ser	gga Gly	acc Thr	tgt Cys	ttc Phe 495	tgc Cys	aag Lys	cgt Arg	ctg Leu	gtg Val 500	acc Thr	1544
gga Gly	cat His	ggc Gly	tgt Cys 505	gac Asp	cgc Arg	tgt Cys	ctg Leu	cct Pro 510	ggc Gly	cac His	tgg Trp	ggc Gly 515	ctg Leu	agc Ser	cat His	1592
gac Asp	ctg Leu	ctg Leu 520	ggc Gly	tgc Cys	cgt Arg	ccc Pro	tgt Cys 525	gac Asp	tgt Cys	gat Asp	gtg Val	ggc Gly 530	ggg Gly	gcc Ala	ttg Leu	1640
gat Asp	cct Pro 535	cag Gln	tgt Cys	gat Asp	gag Glu	gcc Ala 540	acc Thr	ggg Gly	cag Gln	tgc Cys	cgc Arg 545	tgc Cys	cgc Arg	caa Gln	cac His	1688
atg Met 550	att Ile	ggg Gly	cgg Arg	cgc Arg	tgc Cys 555	gaa Glu	caa Gln	gtg Val	cag Gln	cct Pro 560	ggc Gly	tac Tyr	ttc Phe	cgg Arg	cct Pro 565	1736
ttt Phe	ctg Leu	gac Asp	cat His	tta Leu 570	acc Thr	tgg Trp	gag Glu	gct Ala	gag Glu 575	gct Ala	gcc Ala	caa Gln	ggg Gly	cag Gln 580	ggg Gly	1784
ctt Leu	gag Glu	gtg Val	gta Val 585	gag Glu	cgg Arg	ctg Leu	gtg Val	acc Thr 590	aac Asn	cga Arg	gag Glu	act Thr	ccg Pro 595	tcc Ser	tgg Trp	1832
act Thr	ggc Gly	cca Pro 600	ggc Gly	ttt Phe	gtg Val	cgg Arg	ctg Leu 605	cga Arg	gaa Glu	ggg Gly	cag Gln	gaa Glu 610	gtg Val	gag Glu	ttc Phe	1880
ctg Leu	gtg Val 615	acc Thr	tct Ser	ttg Leu	cct Pro	agg Arg 620	gcc Ala	atg Met	gac Asp	tat Tyr	gac Asp 625	ctg Leu	cta Leu	ctg Leu	cgc Arg	1928
tgg Trp 630	gag Glu	ccc Pro	cag Gln	gtc Val	cct Pro 635	gag Glu	caa Gln	tgg Trp	gca Ala	gag Glu 640	ctg Leu	gaa Glu	ctg Leu	atg Met	gtg Val 645	1976
cag Gln	cgt Arg	ccg Pro	ggg Gly	cct Pro 650	gtg Val	tct Ser	gct Ala	cac His	agt Ser 655	ccg Pro	tgc Cys	ggg Gly	cat His	gtg Val 660	ctg Leu	2024
cct Pro	aag Lys	gat Asp	gac Asp 665	cgc Arg	att Ile	cag Gln	ggg Gly	atg Met 670	ctt Leu	cac His	cca Pro	aac Asn	acc Thr 675	agg Arg	ttt Phe	2072

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ttg	gtg	ttt	ccc	aga	cct	gtc	tgc	ctt	gag	cct	ggc	atc	tcc	tac	aag	2120
Leu	Val	Phe	Pro	Arg	Pro	Val	Cys	Leu	Glu	Pro	Gly	Ile	Ser	Tyr	Lys	
		680					685					690				
ctg	aag	ctg	aaa	ctg	atc	gga	aca	ggg	gga	cga	gcc	cag	cct	gaa	acc	2168
Leu	Lys	Leu	Lys	Leu	Ile	Gly	Thr	Gly	Gly	Arg	Ala	Gln	Pro	Glu	Thr	
	695					700					705					
tcc	tac	tct	gga	tta	ctc	att	gac	tcg	ctg	gtc	ctg	cag	ccc	cac	gtc	2216
Ser	Tyr	Ser	Gly	Leu	Leu	Ile	Asp	Ser	Leu	Val	Leu	Gln	Pro	His	Val	
710					715					720					725	
ttg	gtg	cta	gag	atg	ttt	agt	ggg	ggc	gat	gct	gct	gct	ctg	gag	cgc	2264
Leu	Val	Leu	Glu	Met	Phe	Ser	Gly	Gly	Asp	Ala	Ala	Ala	Leu	Glu	Arg	
				730					735					740		
cgt	acc	acc	ttt	gaa	cgc	tac	cgc	tgc	cat	gag	gaa	ggc	ctg	atg	ccc	2312
Arg	Thr	Thr	Phe	Glu	Arg	Tyr	Arg	Cys	His	Glu	Glu	Gly	Leu	Met	Pro	
			745					750					755			
agc	aag	gcc	cct	cta	tct	gag	acc	tgt	gcc	ccc	ctc	ctc	atc	agc	gtg	2360
Ser	Lys	Ala	Pro	Leu	Ser	Glu	Thr	Cys	Ala	Pro	Leu	Leu	Ile	Ser	Val	
		760					765					770				
tcc	gcc	ttg	atc	tac	aat	ggc	gcc	ttg	cca	tgt	cag	tgt	gac	cct	caa	2408
Ser	Ala	Leu	Ile	Tyr	Asn	Gly	Ala	Leu	Pro	Cys	Gln	Cys	Asp	Pro	Gln	
	775					780					785					
ggc	tca	ctg	agt	tct	gaa	tgc	agt	cct	cac	ggc	ggc	cag	tgc	cgg	tgc	2456
Gly	Ser	Leu	Ser	Ser	Glu	Cys	Ser	Pro	His	Gly	Gly	Gln	Cys	Arg	Cys	
790					795					800					805	
aaa	cct	gga	gtg	gtt	gga	cgc	cgt	tgt	gat	gtc	tgt	gct	act	ggc	tac	2504
Lys	Pro	Gly	Val	Val	Gly	Arg	Arg	Cys	Asp	Val	Cys	Ala	Thr	Gly	Tyr	
				810					815					820		
tat	ggc	ttt	ggc	cct	gca	ggc	tgt	caa	gcc	tgc	cag	tgt	agt	cct	gat	2552
Tyr	Gly	Phe	Gly	Pro	Ala	Gly	Cys	Gln	Ala	Cys	Gln	Cys	Ser	Pro	Asp	
			825					830					835			
gga	gca	ctc	agt	gcc	ctc	tgt	gaa	ggg	act	agt	gga	cag	tgc	ccc	tgc	2600
Gly	Ala	Leu	Ser	Ala	Leu	Cys	Glu	Gly	Thr	Ser	Gly	Gln	Cys	Pro	Cys	
		840					845					850				
cga	cct	ggc	gcc	ttt	ggc	ctt	cgc	tgt	gac	cac	tgt	caa	cgt	ggc	cag	2648
Arg	Pro	Gly	Ala	Phe	Gly	Leu	Arg	Cys	Asp	His	Cys	Gln	Arg	Gly	Gln	
	855					860					865					
tgg	gga	ttc	cct	aat	tgc	cgg	ccg	tgt	gtc	tgc	aat	ggg	cgt	gcg	gat	2696
Trp	Gly	Phe	Pro	Asn	Cys	Arg	Pro	Cys	Val	Cys	Asn	Gly	Arg	Ala	Asp	
870					875					880					885	
gag	tgt	gat	acc	cac	aca	ggc	gct	tgc	ctg	ggc	tgc	cgt	gat	tac	acg	2744
Glu	Cys	Asp	Thr	His	Thr	Gly	Ala	Cys	Leu	Gly	Cys	Arg	Asp	Tyr	Thr	
				890					895					900		
ggg	ggc	gag	cac	tgt	gaa	agg	tgc	att	gct	ggc	ttt	cat	ggg	gac	cca	2792
Gly	Gly	Glu	His	Cys	Glu	Arg	Cys	Ile	Ala	Gly	Phe	His	Gly	Asp	Pro	
			905					910					915			
cgg	ctg	cca	tat	ggg	ggc	cag	tgc	cgg	cct	tgt	ccc	tgc	cct	gaa	ggc	2840
Arg	Leu	Pro	Tyr	Gly	Gly	Gln	Cys	Arg	Pro	Cys	Pro	Cys	Pro	Glu	Gly	
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cct ggg agc cag cga cac ttt gct act tct tgc cac cgg gat gga tat Pro Gly Ser Gln Arg His Phe Ala Thr Ser Cys His Arg Asp Gly Tyr 935 940 945	2888
tcc cag caa att gtg tgc cag tgt cga gaa ggc tac aca ggg ctt cgg Ser Gln Gln Ile Val Cys Gln Cys Arg Glu Gly Tyr Thr Gly Leu Arg 950 955 960 965	2936
tgt gaa gct tgt gcc ccc ggg cac ttt ggg gac cca tca aag cca ggt Cys Glu Ala Cys Ala Pro Gly His Phe Gly Asp Pro Ser Lys Pro Gly 970 975 980	2984
ggc agg tgc caa ctg tgt gag tgc agt gga aac att gat ccc atg gac Gly Arg Cys Gln Leu Cys Glu Cys Ser Gly Asn Ile Asp Pro Met Asp 985 990 995	3032
cct gat gcc tgt gat ccc cac acg ggg caa tgc ttg cgt tgt tta Pro Asp Ala Cys Asp Pro His Thr Gly Gln Cys Leu Arg Cys Leu 1000 1005 1010	3077
cac aac aca gag ggg ccc cac tgt ggc tat tgc aag cct ggc ttc His Asn Thr Glu Gly Pro His Cys Gly Tyr Cys Lys Pro Gly Phe 1015 1020 1025	3122
cat ggg caa gct gcc cga cag agc tgt cac cgc tgt acc tgc aac His Gly Gln Ala Ala Arg Gln Ser Cys His Arg Cys Thr Cys Asn 1030 1035 1040	3167
ctt ctg ggc aca gat ccc agg cgg tgc cca tct acc gac ctg tgc Leu Leu Gly Thr Asp Pro Arg Arg Cys Pro Ser Thr Asp Leu Cys 1045 1050 1055	3212
cat tgt gac cca agc act ggg cag tgc cca tgc ctt ccc cat gtc His Cys Asp Pro Ser Thr Gly Gln Cys Pro Cys Leu Pro His Val 1060 1065 1070	3257
caa ggc ctc aac tgt gac cat tgt gcc ccc aac ttt tgg aac ttc Gln Gly Leu Asn Cys Asp His Cys Ala Pro Asn Phe Trp Asn Phe 1075 1080 1085	3302
acc agt ggc cgt ggc tgc cag cct tgt gct tgt cac cca agc cgg Thr Ser Gly Arg Gly Cys Gln Pro Cys Ala Cys His Pro Ser Arg 1090 1095 1100	3347
gcc aga ggc cct acc tgc aat gag ttc aca ggg cag tgt cac tgt Ala Arg Gly Pro Thr Cys Asn Glu Phe Thr Gly Gln Cys His Cys 1105 1110 1115	3392
cat gct ggc ttt ggt ggg agg act tgt tct gag tgc caa gag ctc His Ala Gly Phe Gly Gly Arg Thr Cys Ser Glu Cys Gln Glu Leu 1120 1125 1130	3437
tac tgg gga gac cct ggt ctg cag tgc cgt gcc tgt gac tgt gat Tyr Trp Gly Asp Pro Gly Leu Gln Cys Arg Ala Cys Asp Cys Asp 1135 1140 1145	3482
cct aga gga ata gac aaa cct cag tgt cat cgt tcc aca ggc cac Pro Arg Gly Ile Asp Lys Pro Gln Cys His Arg Ser Thr Gly His 1150 1155 1160	3527
tgt agc tgc cgc cca ggc gtg tct ggt gtg cgc tgt gac cag tgt Cys Ser Cys Arg Pro Gly Val Ser Gly Val Arg Cys Asp Gln Cys 1165 1170 1175	3572

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1165	1170	1175	
gct cgt ggc ttc tca ggg gtt ttt cct gct tgt cac ccc tgc cac Ala Arg Gly Phe Ser Gly Val Phe Pro Ala Cys His Pro Cys His	1180	1185	1190
gct tgc ttt gga gac tgg gat cgt gtg gta cag gac ctg gct gct Ala Cys Phe Gly Asp Trp Asp Arg Val Val Gln Asp Leu Ala Ala	1195	1200	1205
cgg acg cgg cgc ctg gag cag tgg gct cag gag ttg cag caa aca Arg Thr Arg Arg Leu Glu Gln Trp Ala Gln Glu Leu Gln Gln Thr	1210	1215	1220
gga gtg ctg ggt gcc ttt gag agc agc ttt ttg aac atg cag ggg Gly Val Leu Gly Ala Phe Glu Ser Ser Phe Leu Asn Met Gln Gly	1225	1230	1235
aag cta ggc atg gtg cag gcc att atg agt gcc cgc aat gcc tca Lys Leu Gly Met Val Gln Ala Ile Met Ser Ala Arg Asn Ala Ser	1240	1245	1250
gcc gcc tct acg gcg aag ctt gta gag gcc aca gag gga cta cgt Ala Ala Ser Thr Ala Lys Leu Val Glu Ala Thr Glu Gly Leu Arg	1255	1260	1265
cat gaa atc ggg aag acc acc gag cgc ctg act cag tta gaa gca His Glu Ile Gly Lys Thr Thr Glu Arg Leu Thr Gln Leu Glu Ala	1270	1275	1280
gag cta aca gct gtg cag gat gag aac ttc aat gcc aac cat gca Glu Leu Thr Ala Val Gln Asp Glu Asn Phe Asn Ala Asn His Ala	1285	1290	1295
ctc agt ggt ctg gag aga gac ggg ctt gcg ctt aat ctc acc ctg Leu Ser Gly Leu Glu Arg Asp Gly Leu Ala Leu Asn Leu Thr Leu	1300	1305	1310
agg cag ctg gat cag cat ctg gag atc ctc aaa cat tca aat ttc Arg Gln Leu Asp Gln His Leu Glu Ile Leu Lys His Ser Asn Phe	1315	1320	1325
tta ggt gcc tat gac agc atc cga cat gcc cac agc cag tcc aca Leu Gly Ala Tyr Asp Ser Ile Arg His Ala His Ser Gln Ser Thr	1330	1335	1340
gag gca gag cgc cgt gcc aac gcc tcc acc ttt gca gta ccc agc Glu Ala Glu Arg Arg Ala Asn Ala Ser Thr Phe Ala Val Pro Ser	1345	1350	1355
cct gtg agc aac tca gca gat acc cgg cgt cgg acg gaa gtg cta Pro Val Ser Asn Ser Ala Asp Thr Arg Arg Arg Thr Glu Val Leu	1360	1365	1370
atg ggt gcc caa aaa gaa aac ttc aac cgc caa cat ttg gcc aac Met Gly Ala Gln Lys Glu Asn Phe Asn Arg Gln His Leu Ala Asn	1375	1380	1385
cag cag gca ctg gga cgg ctc tct gca cat gcc cac acc ctg agc Gln Gln Ala Leu Gly Arg Leu Ser Ala His Ala His Thr Leu Ser	1390	1395	1400
ctg acg ggc ata aat gag ttg gtg tgt ggg gca cca ggg gac gca			

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Leu	Thr	Gly	Ile	Asn	Glu	Leu	Val	Cys	Gly	Ala	Pro	Gly	Asp	Ala	
		1405					1410					1415			
ccc	tgt	gcc	acc	agc	cct	tgt	ggg	ggt	gcc	gga	tgt	cgg	gat	gaa	4337
Pro	Cys	Ala	Thr	Ser	Pro	Cys	Gly	Gly	Ala	Gly	Cys	Arg	Asp	Glu	
		1420					1425					1430			
gat	ggg	cag	ccc	cgt	tgt	ggt	ggc	ctc	ggt	tgc	agt	ggg	gca	gca	4382
Asp	Gly	Gln	Pro	Arg	Cys	Gly	Gly	Leu	Gly	Cys	Ser	Gly	Ala	Ala	
		1435					1440					1445			
gcc	acg	gca	gat	cta	gcg	ctg	ggc	cgg	gct	cgg	cac	acg	cag	gca	4427
Ala	Thr	Ala	Asp	Leu	Ala	Leu	Gly	Arg	Ala	Arg	His	Thr	Gln	Ala	
		1450					1455					1460			
gag	ctg	cag	cgg	gca	ctg	gta	gaa	ggt	ggc	ggc	atc	ctc	agc	cgg	4472
Glu	Leu	Gln	Arg	Ala	Leu	Val	Glu	Gly	Gly	Gly	Ile	Leu	Ser	Arg	
		1465					1470					1475			
gtg	tct	gag	act	cgt	cgg	cag	gca	gaa	gag	gca	cag	cag	cga	gca	4517
Val	Ser	Glu	Thr	Arg	Arg	Gln	Ala	Glu	Glu	Ala	Gln	Gln	Arg	Ala	
		1480					1485					1490			
cag	gca	gcc	ctg	gac	aag	gct	aat	gct	tcc	agg	ggc	cag	gtg	gaa	4562
Gln	Ala	Ala	Leu	Asp	Lys	Ala	Asn	Ala	Ser	Arg	Gly	Gln	Val	Glu	
		1495					1500					1505			
cag	gcc	aat	cag	gag	ctt	cga	gaa	ctt	atc	cag	aat	gtg	aaa	gac	4607
Gln	Ala	Asn	Gln	Glu	Leu	Arg	Glu	Leu	Ile	Gln	Asn	Val	Lys	Asp	
		1510					1515					1520			
ttc	ctc	agc	cag	gag	gga	gcc	gat	cct	gac	agt	att	gaa	atg	gta	4652
Phe	Leu	Ser	Gln	Glu	Gly	Ala	Asp	Pro	Asp	Ser	Ile	Glu	Met	Val	
		1525					1530					1535			
gcg	act	cgg	gtg	cta	gac	atc	tcc	atc	ccg	gcc	tca	ccc	gag	cag	4697
Ala	Thr	Arg	Val	Leu	Asp	Ile	Ser	Ile	Pro	Ala	Ser	Pro	Glu	Gln	
		1540					1545					1550			
atc	cag	cgc	cta	gcc	agt	gag	att	gca	gaa	cgc	gtc	cga	agc	ctg	4742
Ile	Gln	Arg	Leu	Ala	Ser	Glu	Ile	Ala	Glu	Arg	Val	Arg	Ser	Leu	
		1555					1560					1565			
gcc	gac	gtg	gac	aca	atc	ctg	gcc	cat	acc	atg	ggc	gac	gtg	cgt	4787
Ala	Asp	Val	Asp	Thr	Ile	Leu	Ala	His	Thr	Met	Gly	Asp	Val	Arg	
		1570					1575					1580			
cgg	gct	gaa	cag	cta	ctg	caa	gat	gcg	cac	cgg	gca	cgg	agc	cgg	4832
Arg	Ala	Glu	Gln	Leu	Leu	Gln	Asp	Ala	His	Arg	Ala	Arg	Ser	Arg	
		1585					1590					1595			
gcc	gag	ggt	gag	aga	cag	aag	gca	gag	aca	gtc	caa	gcg	gca	ctg	4877
Ala	Glu	Gly	Glu	Arg	Gln	Lys	Ala	Glu	Thr	Val	Gln	Ala	Ala	Leu	
		1600					1605					1610			
gag	gag	gct	cag	agg	gca	caa	gga	gct	gct	cag	ggt	gcc	atc	tgg	4922
Glu	Glu	Ala	Gln	Arg	Ala	Gln	Gly	Ala	Ala	Gln	Gly	Ala	Ile	Trp	
		1615					1620					1625			
gga	gca	gtg	gtt	gac	aca	caa	aac	aca	gag	cag	acc	ctg	cag	cgg	4967
Gly	Ala	Val	Val	Asp	Thr	Gln	Asn	Thr	Glu	Gln	Thr	Leu	Gln	Arg	
		1630					1635					1640			

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gtc cag gag agg atg gca ggt gca gag aag tct ctg aac tct gcc Val Gln Glu Arg Met Ala Gly Ala Glu Lys Ser Leu Asn Ser Ala 1645 1650 1655	5012
ggt gag cgg gct cgg caa tta gac gcc ctc ctg gag gcc ctg aaa Gly Glu Arg Ala Arg Gln Leu Asp Ala Leu Leu Glu Ala Leu Lys 1660 1665 1670	5057
ctg aaa cgg gca gga aat agc ctg gca gca tct aca gcg gaa gaa Leu Lys Arg Ala Gly Asn Ser Leu Ala Ala Ser Thr Ala Glu Glu 1675 1680 1685	5102
aca gca ggc agt gcc cag agc cgt gcc agg gag gct gag aaa caa Thr Ala Gly Ser Ala Gln Ser Arg Ala Arg Glu Ala Glu Lys Gln 1690 1695 1700	5147
cta cgg gaa caa gta ggt gac caa tac caa aca gtg agg gcg ttg Leu Arg Glu Gln Val Gly Asp Gln Tyr Gln Thr Val Arg Ala Leu 1705 1710 1715	5192
gca gag cgg aag gct gaa ggt gtt ctg gct gca caa gcc agg gca Ala Glu Arg Lys Ala Glu Gly Val Leu Ala Ala Gln Ala Arg Ala 1720 1725 1730	5237
gaa caa ctg cgg gat gag gct cgg gac ctg ttg cag gcc gct cag Glu Gln Leu Arg Asp Glu Ala Arg Asp Leu Leu Gln Ala Ala Gln 1735 1740 1745	5282
gat aag ctg cag cgg cta cag gag ctg gag ggc aca tat gag gag Asp Lys Leu Gln Arg Leu Gln Glu Leu Glu Gly Thr Tyr Glu Glu 1750 1755 1760	5327
aac gag cgt gca ctg gag ggc aaa gcg gcc cag ctg gat ggg ctg Asn Glu Arg Ala Leu Glu Gly Lys Ala Ala Gln Leu Asp Gly Leu 1765 1770 1775	5372
gaa gcc agg atg cgc agt gtg ctc cag gcc atc aac ttg cag gtc Glu Ala Arg Met Arg Ser Val Leu Gln Ala Ile Asn Leu Gln Val 1780 1785 1790	5417
cag atc tac aac acc tgc cag tga ccactcccta gggcctagcc ttgtcgccaa Gln Ile Tyr Asn Thr Cys Gln 1795	5471
gcactgttct gcacacgata gtccgcacat taaagagctc ctggctagca agagctttca	5531
ataaacctgt gtgaacctca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa	5583

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 <211> 1799
 <212> PRT
 <213> Mus musculus

<400> 8

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Leu Pro Trp Glu Leu Arg Leu Gly Leu Leu Leu Ser Val Leu Ala Ala
 20 25 30

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Thr Leu Ala Gln Ala Pro Ser Leu Asp Val Pro Gly Cys Ser Arg Gly
35 40 45

Ser Cys Tyr Pro Ala Thr Gly Asp Leu Leu Val Gly Arg Ala Asp Arg
50 55 60

Leu Thr Ala Ser Ser Thr Cys Gly Leu His Ser Pro Gln Pro Tyr Cys
65 70 75 80

Ile Val Ser His Leu Gln Asp Glu Lys Lys Cys Phe Leu Cys Asp Ser
85 90 95

Arg Arg Pro Phe Ser Ala Arg Asp Asn Pro Asn Ser His Arg Ile Gln
100 105 110

Asn Val Val Thr Ser Phe Ala Pro Gln Arg Arg Thr Ala Trp Trp Gln
115 120 125

Ser Glu Asn Gly Val Pro Met Val Thr Ile Gln Leu Asp Leu Glu Ala
130 135 140

Glu Phe His Phe Thr His Leu Ile Met Thr Phe Lys Thr Phe Arg Pro
145 150 155 160

Ala Ala Met Leu Val Glu Arg Ser Ala Asp Phe Gly Arg Thr Trp His
165 170 175

Val Tyr Arg Tyr Phe Ser Tyr Asp Cys Gly Ala Asp Phe Pro Gly Ile
180 185 190

Pro Leu Ala Pro Pro Arg Arg Trp Asp Asp Val Val Cys Glu Ser Arg
195 200 205

Tyr Ser Glu Ile Glu Pro Ser Thr Glu Gly Glu Val Ile Tyr Arg Val
210 215 220

Leu Asp Pro Ala Ile Pro Ile Pro Asp Pro Tyr Ser Ser Arg Ile Gln
225 230 235 240

Asn Leu Leu Lys Ile Thr Asn Leu Arg Val Asn Leu Thr Arg Leu His
245 250 255

Thr Leu Gly Asp Asn Leu Leu Asp Pro Arg Arg Glu Ile Arg Glu Lys
260 265 270

Tyr Tyr Tyr Ala Leu Tyr Glu Leu Val Ile Arg Gly Asn Cys Phe Cys
275 280 285

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Tyr Gly His Ala Ser Gln Cys Ala Pro Ala Pro Gly Ala Pro Ala His
290 295 300

Ala Glu Gly Met Val His Gly Ala Cys Ile Cys Lys His Asn Thr Arg
305 310 315 320

Gly Leu Asn Cys Glu Gln Cys Gln Asp Phe Tyr Gln Asp Leu Pro Trp
325 330 335

His Pro Ala Glu Asp Gly His Thr His Ala Cys Arg Lys Cys Glu Cys
340 345 350

Asn Gly His Thr His Ser Cys His Phe Asp Met Ala Val Tyr Leu Ala
355 360 365

Ser Gly Asn Val Ser Gly Gly Val Cys Asp Gly Cys Gln His Asn Thr
370 375 380

Ala Gly Arg His Cys Glu Phe Cys Arg Pro Phe Phe Tyr Arg Asp Pro
385 390 395 400

Thr Lys Asp Met Arg Asp Pro Ala Val Cys Arg Pro Cys Asp Cys Asp
405 410 415

Pro Met Gly Ser Gln Asp Gly Gly Arg Cys Asp Ser His Asp Asp Pro
420 425 430

Val Leu Gly Leu Val Ser Gly Gln Cys Arg Cys Lys Glu His Val Val
435 440 445

Gly Thr Arg Cys Gln Gln Cys Arg Asp Gly Phe Phe Gly Leu Ser Ala
450 455 460

Ser Asp Pro Arg Gly Cys Gln Arg Cys Gln Cys Asn Ser Arg Gly Thr
465 470 475 480

Val Pro Gly Ser Ser Pro Cys Asp Ser Ser Ser Gly Thr Cys Phe Cys
485 490 495

Lys Arg Leu Val Thr Gly His Gly Cys Asp Arg Cys Leu Pro Gly His
500 505 510

Trp Gly Leu Ser His Asp Leu Leu Gly Cys Arg Pro Cys Asp Cys Asp
515 520 525

Val Gly Gly Ala Leu Asp Pro Gln Cys Asp Glu Ala Thr Gly Gln Cys
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530

535

540

Arg Cys Arg Gln His Met Ile Gly Arg Arg Cys Glu Gln Val Gln Pro
 545 550 555 560

Gly Tyr Phe Arg Pro Phe Leu Asp His Leu Thr Trp Glu Ala Glu Ala
 565 570 575

Ala Gln Gly Gln Gly Leu Glu Val Val Glu Arg Leu Val Thr Asn Arg
 580 585 590

Glu Thr Pro Ser Trp Thr Gly Pro Gly Phe Val Arg Leu Arg Glu Gly
 595 600 605

Gln Glu Val Glu Phe Leu Val Thr Ser Leu Pro Arg Ala Met Asp Tyr
 610 615 620

Asp Leu Leu Leu Arg Trp Glu Pro Gln Val Pro Glu Gln Trp Ala Glu
 625 630 635 640

Leu Glu Leu Met Val Gln Arg Pro Gly Pro Val Ser Ala His Ser Pro
 645 650 655

Cys Gly His Val Leu Pro Lys Asp Asp Arg Ile Gln Gly Met Leu His
 660 665 670

Pro Asn Thr Arg Phe Leu Val Phe Pro Arg Pro Val Cys Leu Glu Pro
 675 680 685

Gly Ile Ser Tyr Lys Leu Lys Leu Lys Leu Ile Gly Thr Gly Gly Arg
 690 695 700

Ala Gln Pro Glu Thr Ser Tyr Ser Gly Leu Leu Ile Asp Ser Leu Val
 705 710 715 720

Leu Gln Pro His Val Leu Val Leu Glu Met Phe Ser Gly Gly Asp Ala
 725 730 735

Ala Ala Leu Glu Arg Arg Thr Thr Phe Glu Arg Tyr Arg Cys His Glu
 740 745 750

Glu Gly Leu Met Pro Ser Lys Ala Pro Leu Ser Glu Thr Cys Ala Pro
 755 760 765

Leu Leu Ile Ser Val Ser Ala Leu Ile Tyr Asn Gly Ala Leu Pro Cys
 770 775 780

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Gln Cys Asp Pro Gln Gly Ser Leu Ser Ser Glu Cys Ser Pro His Gly
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Gly Gln Cys Arg Cys Lys Pro Gly Val Val Gly Arg Arg Cys Asp Val
805 810 815

Cys Ala Thr Gly Tyr Tyr Gly Phe Gly Pro Ala Gly Cys Gln Ala Cys
820 825 830

Gln Cys Ser Pro Asp Gly Ala Leu Ser Ala Leu Cys Glu Gly Thr Ser
835 840 845

Gly Gln Cys Pro Cys Arg Pro Gly Ala Phe Gly Leu Arg Cys Asp His
850 855 860

Cys Gln Arg Gly Gln Trp Gly Phe Pro Asn Cys Arg Pro Cys Val Cys
865 870 875 880

Asn Gly Arg Ala Asp Glu Cys Asp Thr His Thr Gly Ala Cys Leu Gly
885 890 895

Cys Arg Asp Tyr Thr Gly Gly Glu His Cys Glu Arg Cys Ile Ala Gly
900 905 910

Phe His Gly Asp Pro Arg Leu Pro Tyr Gly Gly Gln Cys Arg Pro Cys
915 920 925

Pro Cys Pro Glu Gly Pro Gly Ser Gln Arg His Phe Ala Thr Ser Cys
930 935 940

His Arg Asp Gly Tyr Ser Gln Gln Ile Val Cys Gln Cys Arg Glu Gly
945 950 955 960

Tyr Thr Gly Leu Arg Cys Glu Ala Cys Ala Pro Gly His Phe Gly Asp
965 970 975

Pro Ser Lys Pro Gly Gly Arg Cys Gln Leu Cys Glu Cys Ser Gly Asn
980 985 990

Ile Asp Pro Met Asp Pro Asp Ala Cys Asp Pro His Thr Gly Gln Cys
995 1000 1005

Leu Arg Cys Leu His Asn Thr Glu Gly Pro His Cys Gly Tyr Cys
1010 1015 1020

Lys Pro Gly Phe His Gly Gln Ala Ala Arg Gln Ser Cys His Arg
1025 1030 1035

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Phe	Trp	Asn	Phe	Thr	Ser	Gly	Arg	Gly	Cys	Gln	Pro	Cys	Ala	Cys
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His	Pro	Ser	Arg	Ala	Arg	Gly	Pro	Thr	Cys	Asn	Glu	Phe	Thr	Gly
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Gln	Cys	His	Cys	His	Ala	Gly	Phe	Gly	Gly	Arg	Thr	Cys	Ser	Glu
1115						1120					1125			
Cys	Gln	Glu	Leu	Tyr	Trp	Gly	Asp	Pro	Gly	Leu	Gln	Cys	Arg	Ala
1130						1135					1140			
Cys	Asp	Cys	Asp	Pro	Arg	Gly	Ile	Asp	Lys	Pro	Gln	Cys	His	Arg
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Ser	Thr	Gly	His	Cys	Ser	Cys	Arg	Pro	Gly	Val	Ser	Gly	Val	Arg
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Cys	Asp	Gln	Cys	Ala	Arg	Gly	Phe	Ser	Gly	Val	Phe	Pro	Ala	Cys
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His	Pro	Cys	His	Ala	Cys	Phe	Gly	Asp	Trp	Asp	Arg	Val	Val	Gln
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Leu	Gln	Gln	Thr	Gly	Val	Leu	Gly	Ala	Phe	Glu	Ser	Ser	Phe	Leu
1220						1225					1230			
Asn	Met	Gln	Gly	Lys	Leu	Gly	Met	Val	Gln	Ala	Ile	Met	Ser	Ala
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Arg	Asn	Ala	Ser	Ala	Ala	Ser	Thr	Ala	Lys	Leu	Val	Glu	Ala	Thr
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Asn	Leu	Thr	Leu	Arg	Gln	Leu	Asp	Gln	His	Leu	Glu	Ile	Leu	Lys
	1310					1315					1320			
His	Ser	Asn	Phe	Leu	Gly	Ala	Tyr	Asp	Ser	Ile	Arg	His	Ala	His
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Ala	Val	Pro	Ser	Pro	Val	Ser	Asn	Ser	Ala	Asp	Thr	Arg	Arg	Arg
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Cys	Arg	Asp	Glu	Asp	Gly	Gln	Pro	Arg	Cys	Gly	Gly	Leu	Gly	Cys
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Ser	Gly	Ala	Ala	Ala	Thr	Ala	Asp	Leu	Ala	Leu	Gly	Arg	Ala	Arg
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Ile	Leu	Ser	Arg	Val	Ser	Glu	Thr	Arg	Arg	Gln	Ala	Glu	Glu	Ala
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Gln	Gln	Arg	Ala	Gln	Ala	Ala	Leu	Asp	Lys	Ala	Asn	Ala	Ser	Arg
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1505

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1520

1525

1530

Ile Glu Met Val Ala Thr Arg Val Leu Asp Ile Ser Ile Pro Ala
1535 1540 1545

Ser Pro Glu Gln Ile Gln Arg Leu Ala Ser Glu Ile Ala Glu Arg
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Val Arg Ser Leu Ala Asp Val Asp Thr Ile Leu Ala His Thr Met
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Gly Asp Val Arg Arg Ala Glu Gln Leu Leu Gln Asp Ala His Arg
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1655 1660 1665

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Thr Ala Glu Glu Thr Ala Gly Ser Ala Gln Ser Arg Ala Arg Glu
1685 1690 1695

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1715 1720 1725

Gln Ala Arg Ala Glu Gln Leu Arg Asp Glu Ala Arg Asp Leu Leu
1730 1735 1740

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1745 1750 1755

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<213> Mus musculus

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<223> laminin 12 gamma 3 chain

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gcg ctg gtg att cag gag aca cac ttc gcg gca ggc gcg gac atg ggc 96
Ala Leu Val Ile Gln Glu Thr His Phe Ala Ala Gly Ala Asp Met Gly
20 25 30

tct tgc tac gac ggt gtg gga cgc gca cag cgc tgt ctg cct gag ttc 144
Ser Cys Tyr Asp Gly Val Gly Arg Ala Gln Arg Cys Leu Pro Glu Phe
35 40 45

gag aac gcg gcg ttc ggc cga cgc gcc gag gcc tcc cac acg tgc gga 192
Glu Asn Ala Ala Phe Gly Arg Arg Ala Glu Ala Ser His Thr Cys Gly
50 55 60

cgg ccc ccg gag gac ttc tgt cca cac gtg ggg gca cca ggg gct ggg 240
Arg Pro Pro Glu Asp Phe Cys Pro His Val Gly Ala Pro Gly Ala Gly
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Leu Gln Cys Gln Arg Cys Asp Asp Ala Asp Pro Gly Arg Arg His Asp
85 90 95

gcc tcc tac ctc aca gac ttc cac agc ccc gat gac agc acc tgg tgg 336
Ala Ser Tyr Leu Thr Asp Phe His Ser Pro Asp Asp Ser Thr Trp Trp
100 105 110

cag agc cca tcc atg gcc ttc ggg gtg cag tac ccc acc tcg gtt aac 384
Gln Ser Pro Ser Met Ala Phe Gly Val Gln Tyr Pro Thr Ser Val Asn
115 120 125

ctg acc ttg agc tta ggg aag gcc tat gag att acc tat gtg agg ctg 432
Leu Thr Leu Ser Leu Gly Lys Ala Tyr Glu Ile Thr Tyr Val Arg Leu
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cag aaa acc tat ggc cgt cct gag ggc cac tac ctg cga ccg ggc gag Gln Lys Thr Tyr Gly Arg Pro Glu Gly His Tyr Leu Arg Pro Gly Glu 180 185 190			576
gat gag agg gtg gcc ttc tgc acc tct gag ttc agt gac atc tcc ccc Asp Glu Arg Val Ala Phe Cys Thr Ser Glu Phe Ser Asp Ile Ser Pro 195 200 205			624
ttg aac ggg ggc aac gtg gcc ttc tcc acc ctg gaa ggc cgt ccc agt Leu Asn Gly Gly Asn Val Ala Phe Ser Thr Leu Glu Gly Arg Pro Ser 210 215 220			672
gcc tac aac ttt gag gag agc cct gtg ctg cag gag tgg gtc acc agc Ala Tyr Asn Phe Glu Glu Ser Pro Val Leu Gln Glu Trp Val Thr Ser 225 230 235 240			720
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cgg agc aca ggc cat ggt ggg cac tgt cag cgg tgc cgt gac cac aca Arg Ser Thr Gly His Gly Gly His Cys Gln Arg Cys Arg Asp His Thr 355 360 365			1104
act ggg cca cac tgt gag cgc tgt gag aag aac tac tac aga tgg tcc Thr Gly Pro His Cys Glu Arg Cys Glu Lys Asn Tyr Tyr Arg Trp Ser 370 375 380			1152
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Thr	Gly	Trp	Lys 420	Cys	Asp	Arg	Cys	Leu 425	Pro	Gly	Phe	His	Ser	Leu	Ser	
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Thr	Cys 450	Asp	Pro	Arg	Ser	Gly 455	Asn	Cys	Pro	Cys	Lys 460	Glu	Asn	Val	Glu	
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115

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145 150 155 160

Gly Thr Ser Tyr Val Val Gly Glu Thr Trp Glu Lys Pro Tyr Gln Gly
165 170 175

Trp Met Met Val Asp Cys Thr Cys Leu Gly Glu Gly Ser Gly Arg Ile
180 185 190

Thr Cys Thr Ser Arg Asn Arg Cys Asn Asp Gln Asp Thr Arg Thr Ser
195 200 205

Tyr Arg Ile Gly Asp Thr Trp Ser Lys Lys Asp Asn Arg Gly Asn Leu
210 215 220

Leu Gln Cys Ile Cys Thr Gly Asn Gly Arg Gly Glu Trp Lys Cys Glu
225 230 235 240

Arg His Thr Ser Leu Gln Thr Thr Ser Ala Gly Ser Gly Ser Phe Thr
245 250 255

Asp Val Arg Thr Ala Ile Tyr Gln Pro Gln Pro His Pro Gln Pro Pro
260 265 270

Pro Tyr Gly His Cys Val Thr Asp Ser Gly Val Val Tyr Ser Val Gly
275 280 285

Met Gln Trp Leu Lys Thr Gln Gly Asn Lys Gln Met Leu Cys Thr Cys
290 295 300

Leu Gly Asn Gly Val Ser Cys Gln Glu Thr Ala Val Thr Gln Thr Tyr
305 310 315 320

Gly Gly Asn Ser Asn Gly Glu Pro Cys Val Leu Pro Phe Thr Tyr Asn
325 330 335

Gly Lys Thr Phe Tyr Ser Cys Thr Thr Glu Gly Arg Gln Asp Gly His
340 345 350

AI012-seqlist-NationalEntry.txt

Leu Trp Cys Ser Thr Thr Ser Asn Tyr Glu Gln Asp Gln Lys Tyr Ser
355 360 365

Phe Cys Thr Asp His Thr Val Leu Val Gln Thr Arg Gly Gly Asn Ser
370 375 380

Asn Gly Ala Leu Cys His Phe Pro Phe Leu Tyr Asn Asn His Asn Tyr
385 390 395 400

Thr Asp Cys Thr Ser Glu Gly Arg Arg Asp Asn Met Lys Trp Cys Gly
405 410 415

Thr Thr Gln Asn Tyr Asp Ala Asp Gln Lys Phe Gly Phe Cys Pro Met
420 425 430

Ala Ala His Glu Glu Ile Cys Thr Thr Asn Glu Gly Val Met Tyr Arg
435 440 445

Ile Gly Asp Gln Trp Asp Lys Gln His Asp Met Gly His Met Met Arg
450 455 460

Cys Thr Cys Val Gly Asn Gly Arg Gly Glu Trp Thr Cys Val Ala Tyr
465 470 475 480

Ser Gln Leu Arg Asp Gln Cys Ile Val Asp Gly Ile Thr Tyr Asn Val
485 490 495

Asn Asp Thr Phe His Lys Arg His Glu Glu Gly His Met Leu Asn Cys
500 505 510

Thr Cys Phe Gly Gln Gly Arg Gly Arg Trp Lys Cys Asp Pro Val Asp
515 520 525

Gln Cys Gln Asp Ser Glu Thr Arg Thr Phe Tyr Gln Ile Gly Asp Ser
530 535 540

Trp Glu Lys Tyr Leu Gln Gly Val Arg Tyr Gln Cys Tyr Cys Tyr Gly
545 550 555 560

Arg Gly Ile Gly Glu Trp Ala Cys Gln Pro Leu Gln Thr Tyr Pro Asp
565 570 575

Thr Ser Gly Pro Val Gln Val Ile Ile Thr Glu Thr Pro Ser Gln Pro
580 585 590

Asn Ser His Pro Ile Gln Trp Ser Ala Pro Glu Ser Ser His Ile Ser
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595

600

605

Lys Tyr Ile Leu Arg Trp Lys Pro Lys Asn Ser Pro Asp Arg Trp Lys

610

615

620

Glu Ala Thr Ile Pro Gly His Leu Asn Ser Tyr Thr Ile Lys Gly Leu
625 630 635 640Arg Pro Gly Val Val Tyr Glu Gly Gln Leu Ile Ser Val Gln His Tyr
645 650 655Gly Gln Arg Glu Val Thr Arg Phe Asp Phe Thr Thr Thr Ser Thr Ser
660 665 670Pro Ala Val Thr Ser Asn Thr Val Thr Gly Glu Thr Thr Pro Leu Ser
675 680 685Pro Val Val Ala Thr Ser Glu Ser Val Thr Glu Ile Thr Ala Ser Ser
690 695 700Phe Val Val Ser Trp Val Ser Ala Ser Asp Thr Val Ser Gly Phe Arg
705 710 715 720Val Glu Tyr Glu Leu Ser Glu Glu Gly Asp Glu Pro Gln Tyr Leu Asp
725 730 735Leu Pro Ser Thr Ala Thr Ser Val Asn Ile Pro Asp Leu Leu Pro Gly
740 745 750Arg Lys Tyr Thr Val Asn Val Tyr Glu Ile Ser Glu Glu Gly Glu Gln
755 760 765Asn Leu Ile Leu Ser Thr Ser Gln Thr Thr Ala Pro Asp Ala Pro Pro
770 775 780Asp Pro Thr Val Asp Gln Val Asp Asp Thr Ser Ile Val Val Arg Trp
785 790 795 800Ser Arg Pro Arg Ala Pro Ile Thr Gly Tyr Arg Ile Val Tyr Ser Pro
805 810 815Ser Val Glu Gly Ser Ser Thr Glu Leu Asn Leu Pro Glu Thr Ala Asn
820 825 830Ser Val Thr Leu Ser Asp Leu Gln Pro Gly Val Gln Tyr Asn Ile Thr
835 840 845

AI012-seqlist-NationalEntry.txt

Ile Tyr Ala Val Glu Glu Asn Gln Glu Ser Thr Pro Val Phe Ile Gln
850 855 860

Gln Glu Thr Thr Gly Val Pro Arg Ser Asp Lys Val Pro Pro Pro Arg
865 870 875 880

Asp Leu Gln Phe Val Glu Val Thr Asp Val Lys Ile Thr Ile Met Trp
885 890 895

Thr Pro Pro Glu Ser Pro Val Thr Gly Tyr Arg Val Asp Val Ile Pro
900 905 910

Val Asn Leu Pro Gly Glu His Gly Gln Arg Leu Pro Val Ser Arg Asn
915 920 925

Thr Phe Ala Glu Val Thr Gly Leu Ser Pro Gly Val Thr Tyr His Phe
930 935 940

Lys Val Phe Ala Val Asn Gln Gly Arg Glu Ser Lys Pro Leu Thr Ala
945 950 955 960

Gln Gln Ala Thr Lys Leu Asp Ala Pro Thr Asn Leu Gln Phe Ile Asn
965 970 975

Glu Thr Asp Thr Thr Val Ile Val Thr Trp Thr Pro Pro Arg Ala Arg
980 985 990

Ile Val Gly Tyr Arg Leu Thr Val Gly Leu Thr Arg Gly Gly Gln Pro
995 1000 1005

Lys Gln Tyr Asn Val Gly Pro Ala Ala Ser Gln Tyr Pro Leu Arg
1010 1015 1020

Asn Leu Gln Pro Gly Ser Glu Tyr Ala Val Ser Leu Val Ala Val
1025 1030 1035

Lys Gly Asn Gln Gln Ser Pro Arg Val Thr Gly Val Phe Thr Thr
1040 1045 1050

Leu Gln Pro Leu Gly Ser Ile Pro His Tyr Asn Thr Glu Val Thr
1055 1060 1065

Glu Thr Thr Ile Val Ile Thr Trp Thr Pro Ala Pro Arg Ile Gly
1070 1075 1080

Phe Lys Leu Gly Val Arg Pro Ser Gln Gly Gly Glu Ala Pro Arg
1085 1090 1095

AI012-seq1ist-NationalEntry.txt

Glu Val Thr Ser Glu Ser Gly Ser Ile Val Val Ser Gly Leu Thr
1100 1105 1110

Pro Gly Val Glu Tyr Val Tyr Thr Ile Ser Val Leu Arg Asp Gly
1115 1120 1125

Gln Glu Arg Asp Ala Pro Ile Val Lys Lys Val Val Thr Pro Leu
1130 1135 1140

Ser Pro Pro Thr Asn Leu His Leu Glu Ala Asn Pro Asp Thr Gly
1145 1150 1155

Val Leu Thr Val Ser Trp Glu Arg Ser Thr Thr Pro Asp Ile Thr
1160 1165 1170

Gly Tyr Arg Ile Thr Thr Thr Pro Thr Asn Gly Gln Gln Gly Tyr
1175 1180 1185

Ser Leu Glu Glu Val Val His Ala Asp Gln Ser Ser Cys Thr Phe
1190 1195 1200

Glu Asn Leu Ser Pro Gly Leu Glu Tyr Asn Val Ser Val Tyr Thr
1205 1210 1215

Val Lys Asp Asp Lys Glu Ser Val Pro Ile Ser Asp Thr Ile Ile
1220 1225 1230

Pro Ala Val Pro Pro Pro Thr Asp Leu Arg Phe Thr Asn Val Gly
1235 1240 1245

Pro Asp Thr Met Arg Val Thr Trp Ala Pro Pro Ser Ser Ile Glu
1250 1255 1260

Leu Thr Asn Leu Leu Val Arg Tyr Ser Pro Val Lys Asn Glu Glu
1265 1270 1275

Asp Val Ala Glu Leu Ser Ile Ser Pro Ser Asp Asn Ala Val Val
1280 1285 1290

Leu Thr Asn Leu Leu Pro Gly Thr Glu Tyr Leu Val Ser Val Ser
1295 1300 1305

Ser Val Tyr Glu Gln His Glu Ser Ile Pro Leu Arg Gly Arg Gln
1310 1315 1320

Lys Thr Ala Leu Asp Ser Pro Ser Gly Ile Asp Phe Ser Asp Ile
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1325

Thr Ala Asn Ser Phe Thr Val His Trp Ile Ala Pro Arg Ala Thr
1340 1345 1350

Ile Thr Gly Tyr Arg Ile Arg His His Pro Glu Asn Met Gly Gly
1355 1360 1365

Arg Pro Arg Glu Asp Arg Val Pro Pro Ser Arg Asn Ser Ile Thr
1370 1375 1380

Leu Thr Asn Leu Asn Pro Gly Thr Glu Tyr Val Val Ser Ile Val
1385 1390 1395

Ala Leu Asn Ser Lys Glu Glu Ser Leu Pro Leu Val Gly Gln Gln
1400 1405 1410

Ser Thr Val Ser Asp Val Pro Arg Asp Leu Glu Val Ile Ala Ala
1415 1420 1425

Thr Pro Thr Ser Leu Leu Ile Ser Trp Asp Ala Pro Ala Val Thr
1430 1435 1440

Val Arg Tyr Tyr Arg Ile Thr Tyr Gly Glu Thr Gly Gly Ser Ser
1445 1450 1455

Pro Val Gln Glu Phe Thr Val Pro Gly Ser Lys Ser Thr Ala Thr
1460 1465 1470

Ile Ser Gly Leu Lys Pro Gly Val Asp Tyr Thr Ile Thr Val Tyr
1475 1480 1485

Ala Val Thr Gly Arg Gly Asp Ser Pro Ala Ser Ser Lys Pro Val
1490 1495 1500

Ser Ile Asn Tyr Arg Thr Glu Ile Asp Lys Pro Ser Gln Met Gln
1505 1510 1515

Val Thr Asp Val Gln Asp Asn Ser Ile Ser Val Arg Trp Leu Pro
1520 1525 1530

Ser Ser Ser Pro Val Thr Gly Tyr Arg Val Thr Thr Ala Pro Lys
1535 1540 1545

Asn Gly Pro Gly Pro Ser Lys Thr Lys Thr Val Gly Pro Asp Gln
1550 1555 1560

AI012-seqlist-NationalEntry.txt

Thr	Glu	Met	Thr	Ile	Glu	Gly	Leu	Gln	Pro	Thr	Val	Glu	Tyr	Val
1565						1570					1575			
Val	Ser	Val	Tyr	Ala	Gln	Asn	Gln	Asn	Gly	Glu	Ser	Gln	Pro	Leu
1580						1585					1590			
Val	Gln	Thr	Ala	Val	Thr	Thr	Ile	Pro	Ala	Pro	Thr	Asn	Leu	Lys
1595						1600					1605			
Phe	Thr	Gln	Val	Thr	Pro	Thr	Ser	Leu	Thr	Ala	Gln	Trp	Thr	Ala
1610						1615					1620			
Pro	Asn	Val	Gln	Leu	Thr	Gly	Tyr	Arg	Val	Arg	Val	Thr	Pro	Lys
1625						1630					1635			
Glu	Lys	Thr	Gly	Pro	Met	Lys	Glu	Ile	Asn	Leu	Ala	Pro	Asp	Ser
1640						1645					1650			
Ser	Ser	Val	Val	Val	Ser	Gly	Leu	Met	Val	Ala	Thr	Lys	Tyr	Glu
1655						1660					1665			
Val	Ser	Val	Tyr	Ala	Leu	Lys	Asp	Thr	Leu	Thr	Ser	Arg	Pro	Ala
1670						1675					1680			
Gln	Gly	Val	Val	Thr	Thr	Leu	Glu	Asn	Val	Ser	Pro	Pro	Arg	Arg
1685						1690					1695			
Ala	Arg	Val	Thr	Asp	Ala	Thr	Glu	Thr	Thr	Ile	Thr	Ile	Ser	Trp
1700						1705					1710			
Arg	Thr	Lys	Thr	Glu	Thr	Ile	Thr	Gly	Phe	Gln	Val	Asp	Ala	Ile
1715						1720					1725			
Pro	Ala	Asn	Gly	Gln	Thr	Pro	Ile	Gln	Arg	Thr	Ile	Arg	Pro	Asp
1730						1735					1740			
Val	Arg	Ser	Tyr	Thr	Ile	Thr	Gly	Leu	Gln	Pro	Gly	Thr	Asp	Tyr
1745						1750					1755			
Lys	Ile	His	Leu	Tyr	Thr	Leu	Asn	Asp	Asn	Ala	Arg	Ser	Ser	Pro
1760						1765					1770			
Val	Val	Ile	Asp	Ala	Ser	Thr	Ala	Ile	Asp	Ala	Pro	Ser	Asn	Leu
1775						1780					1785			
Arg	Phe	Leu	Ala	Thr	Thr	Pro	Asn	Ser	Leu	Leu	Val	Ser	Trp	Gln
1790						1795					1800			

AI012-seqlist-NationalEntry.txt

Pro	Pro	Arg	Ala	Arg	Ile	Thr	Gly	Tyr	Ile	Ile	Lys	Tyr	Glu	Lys
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Pro	Gly	Ser	Pro	Pro	Arg	Glu	Val	Val	Pro	Arg	Pro	Arg	Pro	Gly
	1820					1825					1830			
Val	Thr	Glu	Ala	Thr	Ile	Thr	Gly	Leu	Glu	Pro	Gly	Thr	Glu	Tyr
	1835					1840					1845			
Thr	Ile	Gln	Val	Ile	Ala	Leu	Lys	Asn	Asn	Gln	Lys	Ser	Glu	Pro
	1850					1855					1860			
Leu	Ile	Gly	Arg	Lys	Lys	Thr	Asp	Glu	Leu	Pro	Gln	Leu	Val	Thr
	1865					1870					1875			
Leu	Pro	His	Pro	Asn	Leu	His	Gly	Pro	Glu	Ile	Leu	Asp	Val	Pro
	1880					1885					1890			
Ser	Thr	Val	Gln	Lys	Thr	Pro	Phe	Ile	Thr	Asn	Pro	Gly	Tyr	Asp
	1895					1900					1905			
Thr	Gly	Asn	Gly	Ile	Gln	Leu	Pro	Gly	Thr	Ser	Gly	Gln	Gln	Pro
	1910					1915					1920			
Ser	Leu	Gly	Gln	Gln	Met	Ile	Phe	Glu	Glu	His	Gly	Phe	Arg	Arg
	1925					1930					1935			
Thr	Thr	Pro	Pro	Thr	Thr	Ala	Thr	Pro	Val	Arg	His	Arg	Pro	Arg
	1940					1945					1950			
Pro	Tyr	Pro	Pro	Asn	Val	Asn	Glu	Glu	Ile	Gln	Ile	Gly	His	Val
	1955					1960					1965			
Pro	Arg	Gly	Asp	Val	Asp	His	His	Leu	Tyr	Pro	His	Val	Val	Gly
	1970					1975					1980			
Leu	Asn	Pro	Asn	Ala	Ser	Thr	Gly	Gln	Glu	Ala	Leu	Ser	Gln	Thr
	1985					1990					1995			
Thr	Ile	Ser	Trp	Thr	Pro	Phe	Gln	Glu	Ser	Ser	Glu	Tyr	Ile	Ile
	2000					2005					2010			
Ser	Cys	His	Pro	Val	Gly	Ile	Asp	Glu	Glu	Pro	Leu	Gln	Phe	Arg
	2015					2020					2025			
Val	Pro	Gly	Thr	Ser	Ala	Ser	Ala	Thr	Leu	Thr	Gly	Leu	Thr	Arg

2030

Gly Ala Thr Tyr Asn Ile Ile Val Glu Ala Val Lys Asp Gln Gln
2045 2050 2055

Arg Gln Lys Val Arg Glu Glu Val Val Thr Val Gly Asn Ser Val
2060 2065 2070

Asp Gln Gly Leu Ser Gln Pro Thr Asp Asp Ser Cys Phe Asp Pro
2075 2080 2085

Tyr Thr Val Ser His Tyr Ala Ile Gly Glu Glu Trp Glu Arg Leu
2090 2095 2100

Ser Asp Ser Gly Phe Lys Leu Ser Cys Gln Cys Leu Gly Phe Gly
2105 2110 2115

Ser Gly His Phe Arg Cys Asp Ser Ser Lys Trp Cys His Asp Asn
2120 2125 2130

Gly Val Asn Tyr Lys Ile Gly Glu Lys Trp Asp Arg Gln Gly Glu
2135 2140 2145

Asn Gly Gln Met Met Ser Cys Thr Cys Leu Gly Asn Gly Lys Gly
2150 2155 2160

Glu Phe Lys Cys Asp Pro His Glu Ala Thr Cys Tyr Asp Asp Gly
2165 2170 2175

Lys Thr Tyr His Val Gly Glu Gln Trp Gln Lys Glu Tyr Leu Gly
2180 2185 2190

Ala Ile Cys Ser Cys Thr Cys Phe Gly Gly Gln Arg Gly Trp Arg
2195 2200 2205

Cys Asp Asn Cys Arg Arg Pro Gly Ala Glu Pro Gly Asn Glu Gly
2210 2215 2220

Ser Thr Ala His Ser Tyr Asn Gln Tyr Ser Gln Arg Tyr His Gln
2225 2230 2235

Arg Thr Asn Thr Asn Val Asn Cys Pro Ile Glu Cys Phe Met Pro
2240 2245 2250

Leu Asp Val Gln Ala Asp Arg Glu Asp Ser Arg Glu
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AI012-seq1ist-NationalEntry.txt

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ggt ttc cca gct cct gcc cca ctg cgg gca cta cta ttt ttc ctt tct 96
Gly Phe Pro Ala Pro Ala Pro Leu Arg Ala Leu Leu Phe Phe Leu Ser
20 25 30

ctg ttg gcc tac gtg ttg gtg ctg act gaa aac ata ctc atc att aca 144
Leu Leu Ala Tyr Val Leu Val Leu Thr Glu Asn Ile Leu Ile Ile Thr
35 40 45

gca att agg aac cac ccc acc ctc cac aaa ccc atg tat ttt ttc ttg 192
Ala Ile Arg Asn His Pro Thr Leu His Lys Pro Met Tyr Phe Phe Leu
50 55 60

gct aat atg tca ttc ctg gag att tgg tat gtc act gtt acg att cct 240
Ala Asn Met Ser Phe Leu Glu Ile Trp Tyr Val Thr Val Thr Ile Pro
65 70 75 80

aag atg ctt gct ggc ttc att ggt tcc gag gag aat cat gga cag ctg 288
Lys Met Leu Ala Gly Phe Ile Gly Ser Glu Glu Asn His Gly Gln Leu
85 90 95

atc tcc ttt gag gca tgc atg aca cag ctc tac ttt ttc cta ggc ttg 336
Ile Ser Phe Glu Ala Cys Met Thr Gln Leu Tyr Phe Phe Leu Gly Leu
100 105 110

ggt tgc aca gag tgt gtc ctt ctt gct gtc atg gcc tat gac cgc tat 384
Gly Cys Thr Glu Cys Val Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr
115 120 125

gtg gcc atc tgt cac cca ctc cac tat cct gtc att gtc agt agc cgg 432
Val Ala Ile Cys His Pro Leu His Tyr Pro Val Ile Val Ser Ser Arg
130 135 140

cta tgt gtg cag atg gca gct gga tcc tgg gct gga ggt ttt ggt atc 480

AI012-seqlist-NationalEntry.txt

Leu 145	Cys	Val	Gln	Met	Ala 150	Ala	Gly	Ser	Trp	Ala 155	Gly	Gly	Phe	Gly	Ile 160	
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Ser	Met	Val	Lys	Val 165	Phe	Leu	Ile	Ser	Arg 170	Leu	Ser	Tyr	Cys	Gly 175	Pro	
aac	acc	atc	aac	cac	ttt	ttc	tgt	gat	gtt	tct	cca	ttg	ctc	aac	ttg	576
Asn	Thr	Ile	Asn 180	His	Phe	Phe	Cys	Asp 185	Val	Ser	Pro	Leu	Leu 190	Asn	Leu	
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Ser	Cys	Thr 195	Asp	Met	Ser	Thr	Ala 200	Glu	Leu	Thr	Asp	Phe 205	Ile	Leu	Ala	
att	ttt	att	ctg	ctg	ggg	cca	ctc	tct	gtc	act	ggg	gct	tcc	tat	atg	672
Ile	Phe 210	Ile	Leu	Leu	Gly	Pro 215	Leu	Ser	Val	Thr	Gly 220	Ala	Ser	Tyr	Met	
gcc	atc	aca	ggt	gca	gtg	atg	cgc	atc	ccc	tca	gct	gct	ggc	cgc	cat	720
Ala 225	Ile	Thr	Gly	Ala 230	Val	Met	Arg	Ile	Pro	Ser 235	Ala	Ala	Gly	Arg	His 240	
aag	gcc	ttt	tca	acc	tgt	gcc	tcc	cac	ctc	act	gtt	gtg	att	atc	ttc	768
Lys	Ala	Phe	Ser	Thr 245	Cys	Ala	Ser	His	Leu 250	Thr	Val	Val	Ile	Ile 255	Phe	
tat	gca	gcc	agt	att	ttc	atc	tat	gcc	agg	cct	aag	gca	ctc	tca	gct	816
Tyr	Ala	Ala	Ser 260	Ile	Phe	Ile	Tyr	Ala 265	Arg	Pro	Lys	Ala	Leu 270	Ser	Ala	
ttt	gac	acc	aac	aag	ctg	gtc	tct	gta	ctc	tac	gct	gtc	att	gta	cca	864
Phe	Asp	Thr 275	Asn	Lys	Leu	Val	Ser 280	Val	Leu	Tyr	Ala	Val 285	Ile	Val	Pro	
ttg	ctc	aat	ccc	atc	atc	tac	tgc	ttg	cgc	aat	caa	gaa	gtc	aaa	aaa	912
Leu 290	Leu	Asn	Pro	Ile	Ile	Tyr 295	Cys	Leu	Arg	Asn	Gln 300	Glu	Val	Lys	Lys	
gcc	cta	cgt	cgc	act	ctg	cac	ctg	gcc	caa	ggc	cag	gac	gcc	aat	acc	960
Ala 305	Leu	Arg	Arg	Thr	Leu 310	His	Leu	Ala	Gln	Gly 315	Gln	Asp	Ala	Asn	Thr 320	
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Lys	Lys	Ser	Ser	Arg 325	Asp	Gly										

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 <212> PRT
 <213> Mus musculus

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Gly	Phe	Pro	Ala 20	Pro	Ala	Pro	Leu	Arg 25	Ala	Leu	Leu	Phe	Phe 30	Leu	Ser

AI012-seqlist-NationalEntry.txt

Leu Leu Ala Tyr Val Leu Val Leu Thr Glu Asn Ile Leu Ile Ile Thr
35 40 45

Ala Ile Arg Asn His Pro Thr Leu His Lys Pro Met Tyr Phe Phe Leu
50 55 60

Ala Asn Met Ser Phe Leu Glu Ile Trp Tyr Val Thr Val Thr Ile Pro
65 70 75 80

Lys Met Leu Ala Gly Phe Ile Gly Ser Glu Glu Asn His Gly Gln Leu
85 90 95

Ile Ser Phe Glu Ala Cys Met Thr Gln Leu Tyr Phe Phe Leu Gly Leu
100 105 110

Gly Cys Thr Glu Cys Val Leu Leu Ala Val Met Ala Tyr Asp Arg Tyr
115 120 125

Val Ala Ile Cys His Pro Leu His Tyr Pro Val Ile Val Ser Ser Arg
130 135 140

Leu Cys Val Gln Met Ala Ala Gly Ser Trp Ala Gly Gly Phe Gly Ile
145 150 155 160

Ser Met Val Lys Val Phe Leu Ile Ser Arg Leu Ser Tyr Cys Gly Pro
165 170 175

Asn Thr Ile Asn His Phe Phe Cys Asp Val Ser Pro Leu Leu Asn Leu
180 185 190

Ser Cys Thr Asp Met Ser Thr Ala Glu Leu Thr Asp Phe Ile Leu Ala
195 200 205

Ile Phe Ile Leu Leu Gly Pro Leu Ser Val Thr Gly Ala Ser Tyr Met
210 215 220

Ala Ile Thr Gly Ala Val Met Arg Ile Pro Ser Ala Ala Gly Arg His
225 230 235 240

Lys Ala Phe Ser Thr Cys Ala Ser His Leu Thr Val Val Ile Ile Phe
245 250 255

Tyr Ala Ala Ser Ile Phe Ile Tyr Ala Arg Pro Lys Ala Leu Ser Ala
260 265 270

Phe Asp Thr Asn Lys Leu Val Ser Val Leu Tyr Ala Val Ile Val Pro
275 280 285

AI012-seqlist-NationalEntry.txt

Leu Leu Asn Pro Ile Ile Tyr Cys Leu Arg Asn Gln Glu Val Lys Lys
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Lys Lys Ser Ser Arg Asp Gly
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gaattgggat taaactc atg tct ctt ttt ccc caa aga aat tta gat gcc 170
Met Ser Leu Phe Pro Gln Arg Asn Leu Asp Ala
1 5 10

atg aac aga tca gca gca cat gta acc gaa ttt gtt ctc ttg gga ttt 218
Met Asn Arg Ser Ala Ala His Val Thr Glu Phe Val Leu Leu Gly Phe
15 20 25

cct ggt tcc tgg aag ata cag att ttc ctc ttc gtg ttg ttt ttg gtg 266
Pro Gly Ser Trp Lys Ile Gln Ile Phe Leu Phe Val Leu Phe Leu Val
30 35 40

ttt tat gtc ttg aca ttg ttg gga aat gga gcc atc atc tgt gca gta 314
Phe Tyr Val Leu Thr Leu Leu Gly Asn Gly Ala Ile Ile Cys Ala Val
45 50 55

aga tgt gac tca cgt cta cat acc ccc atg tac ttc ctc ctg gga aat 362
Arg Cys Asp Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Gly Asn
60 65 70 75

ttt tcc ttc ctt gaa atc tgg tat gtt tcc tcc act att cct aac ata 410
Phe Ser Phe Leu Glu Ile Trp Tyr Val Ser Ser Thr Ile Pro Asn Ile
80 85 90

cta gcc aac att ctg tct aag acc aag gcc atc tca ttt tca ggg tgc 458
Leu Ala Asn Ile Leu Ser Lys Thr Lys Ala Ile Ser Phe Ser Gly Cys
95 100 105

ttc ctg cag ttc tat ttc ttc ttt tca ctg ggt aca act gaa tgt ctc 506
Phe Leu Gln Phe Tyr Phe Phe Phe Ser Leu Gly Thr Thr Glu Cys Leu
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tta cat tac cct act atc atg act agg agg ctg tgt tgc att ctg gta Leu His Tyr Pro Thr Ile Met Thr Arg Arg Leu Cys Cys Ile Leu Val 140 145 150 155			602
tcc tca tgc tgg ctc att gga ttt ctt ggg tac cca atc cct atc ttc Ser Ser Cys Trp Leu Ile Gly Phe Leu Gly Tyr Pro Ile Pro Ile Phe 160 165 170			650
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ctc tgt gac atg gac cca ttg atg gct ttg tcc tgt gcc cca gct cct Leu Cys Asp Met Asp Pro Leu Met Ala Leu Ser Cys Ala Pro Ala Pro 190 195 200			746
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act att gca tac att ctt cgg tcc tat att ttg ttg ctc agg gct gtt Thr Ile Ala Tyr Ile Leu Arg Ser Tyr Ile Leu Leu Arg Ala Val 220 225 230 235			842
ttt cag gtt cct tct gca gct ggc cga cga aaa gcc ttc tct acc tgt Phe Gln Val Pro Ser Ala Ala Gly Arg Arg Lys Ala Phe Ser Thr Cys 240 245 250			890
ggt tcc cat tta gtt gtg gtg tca ctc ttc tat ggt aca gta atg gta Gly Ser His Leu Val Val Val Ser Leu Phe Tyr Gly Thr Val Met Val 255 260 265			938
atg tat gtg agt cct aca tat ggc att cca att ttg atg cag aag atc Met Tyr Val Ser Pro Thr Tyr Gly Ile Pro Ile Leu Met Gln Lys Ile 270 275 280			986
ctt aca ctt gta tac tct gta atg act cct ctc ttt aat cct ctg att Leu Thr Leu Val Tyr Ser Val Met Thr Pro Leu Phe Asn Pro Leu Ile 285 290 295			1034
tat agc ctt cgt aac aag gac atg aaa ctt gct ctg aga aat gtt ttg Tyr Ser Leu Arg Asn Lys Asp Met Lys Leu Ala Leu Arg Asn Val Leu 300 305 310 315			1082
tta gga atg aga att gtc aaa aat atg taa ttcaaagctg tttcatactc Leu Gly Met Arg Ile Val Lys Asn Met 320			1132
acatgttcta ataaagaaaa aactggagat gaatcaattc attcagttgt ctttaccctt			1192
tgttctatgt ttttgagaca ctgtctcatg tggccctggc tagcctcaaa ctcatctct			1252
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AI012-seqlist-NationalEntry.txt

<210> 16
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 <213> Mus musculus

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Ala His Val Thr Glu Phe Val Leu Leu Gly Phe Pro Gly Ser Trp Lys
 20 25 30

Ile Gln Ile Phe Leu Phe Val Leu Phe Leu Val Phe Tyr Val Leu Thr
 35 40 45

Leu Leu Gly Asn Gly Ala Ile Ile Cys Ala Val Arg Cys Asp Ser Arg
 50 55 60

Leu His Thr Pro Met Tyr Phe Leu Leu Gly Asn Phe Ser Phe Leu Glu
 65 70 75 80

Ile Trp Tyr Val Ser Ser Thr Ile Pro Asn Ile Leu Ala Asn Ile Leu
 85 90 95

Ser Lys Thr Lys Ala Ile Ser Phe Ser Gly Cys Phe Leu Gln Phe Tyr
 100 105 110

Phe Phe Phe Ser Leu Gly Thr Thr Glu Cys Leu Phe Leu Ala Val Met
 115 120 125

Ala Tyr Asp Arg Tyr Leu Ala Ile Cys Arg Pro Leu His Tyr Pro Thr
 130 135 140

Ile Met Thr Arg Arg Leu Cys Cys Ile Leu Val Ser Ser Cys Trp Leu
 145 150 155 160

Ile Gly Phe Leu Gly Tyr Pro Ile Pro Ile Phe Ser Ile Ser Gln Leu
 165 170 175

Pro Phe Cys Gly Ser Asn Ile Ile Asp His Phe Leu Cys Asp Met Asp
 180 185 190

Pro Leu Met Ala Leu Ser Cys Ala Pro Ala Pro Ile Thr Glu Phe Ile
 195 200 205

Phe Tyr Ala Gln Ser Ser Phe Val Leu Phe Phe Thr Ile Ala Tyr Ile
 210 215 220

AI012-seqlist-NationalEntry.txt

Leu Arg Ser Tyr Ile Leu Leu Leu Arg Ala Val Phe Gln Val Pro Ser
225 230 235 240

Ala Ala Gly Arg Arg Lys Ala Phe Ser Thr Cys Gly Ser His Leu Val
245 250 255

Val Val Ser Leu Phe Tyr Gly Thr Val Met Val Met Tyr Val Ser Pro
260 265 270

Thr Tyr Gly Ile Pro Ile Leu Met Gln Lys Ile Leu Thr Leu Val Tyr
275 280 285

Ser Val Met Thr Pro Leu Phe Asn Pro Leu Ile Tyr Ser Leu Arg Asn
290 295 300

Lys Asp Met Lys Leu Ala Leu Arg Asn Val Leu Leu Gly Met Arg Ile
305 310 315 320

Val Lys Asn Met

<210> 17
<211> 1134
<212> DNA
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<309> 1999-04-25
<313> (1)..(1134)

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<222> (99)..(99)
<223> n is a, c, g, or t

<220>
<221> CDS
<222> (106)..(1056)

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cctgccccctc cctctccct ggagcctccc tagccctcng gcgtc atg ttg ggt tgg 117
Met Leu Gly Trp
1

agc aat ggc acc tac aat gag tcc tac acc agc ttc ctc ctc atg ggc 165
Ser Asn Gly Thr Tyr Asn Glu Ser Tyr Thr Ser Phe Leu Leu Met Gly
5 10 15 20

ttc cca ggg atg cag gaa gcc aga gcc ctc ctg gtg ctg ccc ttc ctc 213
Phe Pro Gly Met Gln Glu Ala Arg Ala Leu Leu Val Leu Pro Phe Leu
25 30 35

AI012-seqlist-NationalEntry.txt

agc ctc tac ctg gtg atc ctc ttc acc aat gcc ctg gtc atc cac acg Ser Leu Tyr Leu Val Ile Leu Phe Thr Asn Ala Leu Val Ile His Thr 40 45 50	261
gtg gca tcc cag cgc agc ctg cac cag ccc atg tac ctg ctc att gcc Val Ala Ser Gln Arg Ser Leu His Gln Pro Met Tyr Leu Leu Ile Ala 55 60 65	309
ctg ctc ctg gct gtc aat atc tgt gct gcc acc acg gtg ctg ccc ccc Leu Leu Leu Ala Val Asn Ile Cys Ala Ala Thr Thr Val Leu Pro Pro 70 75 80	357
atg ctc ttc agc ttc tcc aca cgc ttc aac cgc atc tcc ctc cct cga Met Leu Phe Ser Phe Ser Thr Arg Phe Asn Arg Ile Ser Leu Pro Arg 85 90 95 100	405
tgc ttg gga cag atg ttc tgc atc tac ttt ctg gtt tct atg gac tgc Cys Leu Gly Gln Met Phe Cys Ile Tyr Phe Leu Val Ser Met Asp Cys 105 110 115	453
aac atc ctc ctg gtc atg gct cta gat cgc tat gtg gct atc tgc tac Asn Ile Leu Leu Val Met Ala Leu Asp Arg Tyr Val Ala Ile Cys Tyr 120 125 130	501
cct ctc cgc tac cca gaa ata gtg aca gga cag tta ctg gct ggt ctg Pro Leu Arg Tyr Pro Glu Ile Val Thr Gly Gln Leu Leu Ala Gly Leu 135 140 145	549
gtg gtg ttg gca gtc acc agg agc aca agc att gtt gct cca gtg gtg Val Val Leu Ala Val Thr Arg Ser Thr Ser Ile Val Ala Pro Val Val 150 155 160	597
gtg ctg gcc tcg cgg gtt cgc ttc tgc cgc tca gat gtg atc cgc cac Val Leu Ala Ser Arg Val Arg Phe Cys Arg Ser Asp Val Ile Arg His 165 170 175 180	645
ttt gcc tgt gag cac atg gcc ctg atg aag ctc tcc tgt gga gac atc Phe Ala Cys Glu His Met Ala Leu Met Lys Leu Ser Cys Gly Asp Ile 185 190 195	693
tcg ctg aat aaa acg gcg gga ctc att att cga acc ttt aat aga gtc Ser Leu Asn Lys Thr Ala Gly Leu Ile Ile Arg Thr Phe Asn Arg Val 200 205 210	741
ctg gat atg ctc ctt cta ggc acc tcc tac tcc cgc atc atc cat gct Leu Asp Met Leu Leu Leu Gly Thr Ser Tyr Ser Arg Ile Ile His Ala 215 220 225	789
gcc ttc agg atc tca tca ggt gga gca cgg tcc aaa gcc ctg aac acc Ala Phe Arg Ile Ser Ser Gly Gly Ala Arg Ser Lys Ala Leu Asn Thr 230 235 240	837
tgt ggt tcc cac ctg ctg gtc atc ttc acc gtc tac tcc tcc acc atg Cys Gly Ser His Leu Leu Val Ile Phe Thr Val Tyr Ser Ser Thr Met 245 250 255 260	885
tcc tca tcc att gtc tac cgt gtg gct cgc act gcc tcc caa gat gtg Ser Ser Ser Ile Val Tyr Arg Val Ala Arg Thr Ala Ser Gln Asp Val 265 270 275	933
cac aac ctg ctc agt gct ttc tat ctg ttg ctc ccg tgt ctg gtc aac His Asn Leu Leu Ser Ala Phe Tyr Leu Leu Leu Pro Cys Leu Val Asn 280 285 290	981

AI012-seqlist-NationalEntry.txt

ccc atc atc tac ggg gcc aga acc aag gaa atc agg cag cac ctg gta 1029
Pro Ile Ile Tyr Gly Ala Arg Thr Lys Glu Ile Arg Gln His Leu Val
295 300 305

agg tca ttc ctg agt gca ggc ccc tga ctctcctatg atcagtcctg 1076
Arg Ser Phe Leu Ser Ala Gly Pro
310 315

gttggccccct cagtattcct ggtgaaactg aggaaggaag aaatggagtc agagggac 1134

<210> 18
<211> 316
<212> PRT
<213> Mus musculus

<400> 18

Met Leu Gly Trp Ser Asn Gly Thr Tyr Asn Glu Ser Tyr Thr Ser Phe
1 5 10 15

Leu Leu Met Gly Phe Pro Gly Met Gln Glu Ala Arg Ala Leu Leu Val
20 25 30

Leu Pro Phe Leu Ser Leu Tyr Leu Val Ile Leu Phe Thr Asn Ala Leu
35 40 45

Val Ile His Thr Val Ala Ser Gln Arg Ser Leu His Gln Pro Met Tyr
50 55 60

Leu Leu Ile Ala Leu Leu Leu Ala Val Asn Ile Cys Ala Ala Thr Thr
65 70 75 80

Val Leu Pro Pro Met Leu Phe Ser Phe Ser Thr Arg Phe Asn Arg Ile
85 90 95

Ser Leu Pro Arg Cys Leu Gly Gln Met Phe Cys Ile Tyr Phe Leu Val
100 105 110

Ser Met Asp Cys Asn Ile Leu Leu Val Met Ala Leu Asp Arg Tyr Val
115 120 125

Ala Ile Cys Tyr Pro Leu Arg Tyr Pro Glu Ile Val Thr Gly Gln Leu
130 135 140

Leu Ala Gly Leu Val Val Leu Ala Val Thr Arg Ser Thr Ser Ile Val
145 150 155 160

Ala Pro Val Val Val Leu Ala Ser Arg Val Arg Phe Cys Arg Ser Asp
165 170 175

AI012-seqlist-NationalEntry.txt

Val Ile Arg His Phe Ala Cys Glu His Met Ala Leu Met Lys Leu Ser
180 185 190

Cys Gly Asp Ile Ser Leu Asn Lys Thr Ala Gly Leu Ile Ile Arg Thr
195 200 205

Phe Asn Arg Val Leu Asp Met Leu Leu Leu Gly Thr Ser Tyr Ser Arg
210 215 220

Ile Ile His Ala Ala Phe Arg Ile Ser Ser Gly Gly Ala Arg Ser Lys
225 230 235 240

Ala Leu Asn Thr Cys Gly Ser His Leu Leu Val Ile Phe Thr Val Tyr
245 250 255

Ser Ser Thr Met Ser Ser Ser Ile Val Tyr Arg Val Ala Arg Thr Ala
260 265 270

Ser Gln Asp Val His Asn Leu Leu Ser Ala Phe Tyr Leu Leu Leu Pro
275 280 285

Cys Leu Val Asn Pro Ile Ile Tyr Gly Ala Arg Thr Lys Glu Ile Arg
290 295 300

Gln His Leu Val Arg Ser Phe Leu Ser Ala Gly Pro
305 310 315

<210> 19
<211> 1421
<212> DNA
<213> Mus musculus

<300>
<308> AF121976
<309> 1999-12-25
<313> (1)..(1421)

<220>
<221> CDS
<222> (291)..(1310)

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gctgaaagcc agacgtaaca gcaccacggt ggtggtgaac acggtgggct cagagaatcc 120
ggataagcct gcttttttat actaagttgg cattataaaa aagcattgct tatcaatttg 180
ttgcaacgaa caggtcacta tcagtcaaaa taaaatcatt atttgatttc aattttgtcc 240
cactccctgc ctctgtcatc acgatactgt gatgccatgg tgtccgactt atg ccc 296
Met Pro
1

AI012-seqlist-NationalEntry.txt

gag aag atg ttg agc aaa ctt atc gct tat ctg ctt ctc ata gag tct Glu Lys Met 5 Leu Ser Lys Leu 10 Ile Ala Tyr Leu Leu 15 Ile Glu Ser	344
tgc aga caa act gcg caa ctc gtg aaa ggt agg cgg atc tgg gtc gac Cys Arg Gln Thr Ala Gln Leu 20 Val Lys Gly Arg 30 Arg Ile Trp Val Asp	392
tct agg cct cac tgg cct aat acg act cac tat agg gag ctc gag gat Ser Arg Pro His Trp Pro 40 Asn Thr Thr His Tyr 45 Arg Glu Leu Glu Asp 50	440
cag cat gtt tgg att gct att ccc ttc tgc tcc atg tac atc ctt gct Gln His Val Trp Ile 55 Ala Ile Pro Phe 60 Cys Ser Met Tyr Ile 65 Leu Ala	488
ctg gtt gga aat ggt acc atc ctc tat atc att ata aca gac agg gct Leu Val Gly Asn 70 Gly Thr Ile Leu Tyr 75 Ile Ile Ile Thr 80 Asp Arg Ala	536
ctc cat gag cca atg tac ctc ttc ttg tgt ctg ctt tct atc act gat Leu His Glu 85 Pro Met Tyr Leu Phe 90 Leu Cys Leu Leu 95 Ser Ile Thr Asp	584
ctg gtt ctc tgt tca aca aca ttg cct aaa atg ctg gca ata ttc tgg Leu Val 100 Leu Cys Ser Thr 105 Thr Leu Pro Lys Met 110 Ala Ile Phe Trp	632
ctc aga tcc cat gtc att tcc tac cat ggc tgc ctc act cag atg ttt Leu Arg Ser His Val 120 Ser Tyr His Gly Cys 125 Leu Thr Gln Met Phe 130	680
ttt gta cat gca gtc ttt gcc aca gag tca gct gtt ctg ctg gcc atg Phe Val His Ala Val 135 Phe Ala Thr Glu Ser 140 Ala Val Leu Leu 145 Ala Met	728
gct ttt gat cga tat gtt gct atc tgc aga cca ctc cac tat aca tcc Ala Phe Asp Arg 150 Tyr Val Ala Ile Cys 155 Arg Pro Leu His Tyr 160 Thr Ser	776
atc ctc aat gct gtt gta att ggg aag att ggc ctg gca tgc gtg act Ile Leu Asn 165 Ala Val Val Ile Gly 170 Lys Ile Gly Leu Ala 175 Cys Val Thr	824
cgt ggc ctt ctc ttt gtc ttc ccc ttt gtc att ctc att gaa cgt tta Arg Gly 180 Leu Leu Phe Val 185 Phe Pro Phe Val Ile Leu 190 Ile Glu Arg Leu	872
ccc ttc tgt gga cat cat ata atc cct cac act tac tgt gag cac atg Pro Phe Cys Gly His 200 His Ile Ile Pro His Thr 205 Tyr Cys Glu His Met 210	920
ggc ata gcc aag ctc gcc tgt gcc agc atc aag cct aac acc atc tat Gly Ile Ala Lys 215 Leu Ala Cys Ala Ser Ile 220 Lys Pro Asn Thr 225 Ile Tyr	968
ggt ctt act gta gca ctt tca gtc act ggc atg gat gtg gtc ctc att Gly Leu Thr Val 230 Ala Leu Ser Val Thr 235 Gly Met Asp Val 240 Val Leu Ile	1016
gca acc tcc tac atc ctg att ctg cag gcc gtg ctg cga ctg ccc tca Ala Thr Ser Tyr Ile Leu Ile Leu Gln Ala Val 78 Arg Leu Pro Ser	1064

AI012-seqlist-NationalEntry.txt

245	250	255	
aag gat gcc cag ttc cga gca ttc agc aca tgt gga gcc cac att tgt Lys Asp Ala Gln Phe Arg Ala Phe Ser Thr Cys Gly Ala His Ile Cys 260 265 270			1112
gta att ctt gtc ttc tat atc ccc gca ttc ttt tca ttt ttc act cac Val Ile Leu Val Phe Tyr Ile Pro Ala Phe Phe Ser Phe Phe Thr His 275 280 285 290			1160
cgc ttt ggt cac cac gtg cct cct cag gta cac atc ata ctt gca aat Arg Phe Gly His His Val Pro Pro Gln Val His Ile Ile Leu Ala Asn 295 300 305			1208
ctt tat ctc ctt gtg cct cct gtt ctc aac ccc cta gtc tat ggc atc Leu Tyr Leu Leu Val Pro Pro Val Leu Asn Pro Leu Val Tyr Gly Ile 310 315 320			1256
aat acc aaa caa atc cgc ctg aga ata ctt gac ttt ttt gta aag aga Asn Thr Lys Gln Ile Arg Leu Arg Ile Leu Asp Phe Phe Val Lys Arg 325 330 335			1304
agg tga caataatctc cacatataacc aaaggctaag gagttcctgg ctttagtttg Arg			1360

ctgcttctgc tgatctcagt aagtcagtgt atgtacattt aagattttga gatctagagc	1420
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a	1421
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<210> 20
 <211> 339
 <212> PRT
 <213> Mus musculus

<400> 20

Met Pro Glu Lys Met Leu Ser Lys Leu Ile Ala Tyr Leu Leu Leu Ile	1 5 10 15
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Glu Ser Cys Arg Gln Thr Ala Gln Leu Val Lys Gly Arg Arg Ile Trp	20 25 30
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Val Asp Ser Arg Pro His Trp Pro Asn Thr Thr His Tyr Arg Glu Leu	35 40 45
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Glu Asp Gln His Val Trp Ile Ala Ile Pro Phe Cys Ser Met Tyr Ile	50 55 60
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Leu Ala Leu Val Gly Asn Gly Thr Ile Leu Tyr Ile Ile Ile Thr Asp	65 70 75 80
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Arg Ala Leu His Glu Pro Met Tyr Leu Phe Leu Cys Leu Leu Ser Ile	85 90 95
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Thr Asp Leu Val Leu Cys Ser Thr Thr Leu Pro Lys Met Leu Ala Ile	
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AI012-seqlist-NationalEntry.txt

100

105

110

Phe Trp Leu Arg Ser His Val Ile Ser Tyr His Gly Cys Leu Thr Gln
115 120 125

Met Phe Phe Val His Ala Val Phe Ala Thr Glu Ser Ala Val Leu Leu
130 135 140

Ala Met Ala Phe Asp Arg Tyr Val Ala Ile Cys Arg Pro Leu His Tyr
145 150 155 160

Thr Ser Ile Leu Asn Ala Val Val Ile Gly Lys Ile Gly Leu Ala Cys
165 170 175

Val Thr Arg Gly Leu Leu Phe Val Phe Pro Phe Val Ile Leu Ile Glu
180 185 190

Arg Leu Pro Phe Cys Gly His His Ile Ile Pro His Thr Tyr Cys Glu
195 200 205

His Met Gly Ile Ala Lys Leu Ala Cys Ala Ser Ile Lys Pro Asn Thr
210 215 220

Ile Tyr Gly Leu Thr Val Ala Leu Ser Val Thr Gly Met Asp Val Val
225 230 235 240

Leu Ile Ala Thr Ser Tyr Ile Leu Ile Leu Gln Ala Val Leu Arg Leu
245 250 255

Pro Ser Lys Asp Ala Gln Phe Arg Ala Phe Ser Thr Cys Gly Ala His
260 265 270

Ile Cys Val Ile Leu Val Phe Tyr Ile Pro Ala Phe Phe Ser Phe Phe
275 280 285

Thr His Arg Phe Gly His His Val Pro Pro Gln Val His Ile Ile Leu
290 295 300

Ala Asn Leu Tyr Leu Leu Val Pro Pro Val Leu Asn Pro Leu Val Tyr
305 310 315 320

Gly Ile Asn Thr Lys Gln Ile Arg Leu Arg Ile Leu Asp Phe Phe Val
325 330 335

Lys Arg Arg

AI012-seqlist-NationalEntry.txt

<210> 21
 <211> 930
 <212> DNA
 <213> M.musculus

<300>
 <308> x92969
 <309> 1996-07-01
 <313> (1)..(930)

<220>
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 <222> (1)..(930)

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Met Gln Arg Asn Asn Phe Thr Glu Val Ile Glu Phe Val Phe Leu Gly
1                               5                               10          15

ttc tcc agc ttt gga aag cat cag ata acc ctc ttt gtg gtt ttc cta      96
Phe Ser Ser Phe Gly Lys His Gln Ile Thr Leu Phe Val Val Phe Leu
20                               25                               30

acc atc tac att tta act ctg gct ggc aac atc att ata gtg aca atc      144
Thr Ile Tyr Ile Leu Thr Leu Ala Gly Asn Ile Ile Ile Val Thr Ile
35                               40                               45

aca cac ata gac cac cac ctt cac act ccc atg tac ttc ttt ctg agc      192
Thr His Ile Asp His His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50                               55                               60

atg ttg gca agc tca gag act gtg tac aca ctg gtc att gtc cca cga      240
Met Leu Ala Ser Ser Glu Thr Val Tyr Thr Leu Val Ile Val Pro Arg
65                               70                               75          80

atg ctt tcc agc ctg att ttt tac aac ctt ccc ata tcc ttg gca ggc      288
Met Leu Ser Ser Leu Ile Phe Tyr Asn Leu Pro Ile Ser Leu Ala Gly
85                               90                               95

tgc gca acc caa atg ttc ttt ttt gtc act ttg gcc acc aac aac tgc      336
Cys Ala Thr Gln Met Phe Phe Phe Val Thr Leu Ala Thr Asn Asn Cys
100                              105                              110

ttt ctg ctc aca gca atg ggt tat gat cgt tat gtg gct att tgt aat      384
Phe Leu Leu Thr Ala Met Gly Tyr Asp Arg Tyr Val Ala Ile Cys Asn
115                              120                              125

cct ctg aga tat aca atc atc atg agc aag gga atg tgt gcc ttg ttg      432
Pro Leu Arg Tyr Thr Ile Ile Met Ser Lys Gly Met Cys Ala Leu Leu
130                              135                              140

gtc tgt ggg tct tta ggc act ggc ctg gtt atg gca gtt ctt cat gtg      480
Val Cys Gly Ser Leu Gly Thr Gly Leu Val Met Ala Val Leu His Val
145                              150                              155          160

cca gcc atg ttc cat ttg ccc ttt tgt ggc acg gtg gtg gag cac ttt      528
Pro Ala Met Phe His Leu Pro Phe Cys Gly Thr Val Val Glu His Phe
165                              170                              175

ttc tgt gac ata tac cca gta atg aag ctt tct tgt gtt gat acc act      576
Phe Cys Asp Ile Tyr Pro Val Met Lys Leu Ser Cys Val Asp Thr Thr
180                              185                              190
    
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AI012-seqlist-NationalEntry.txt

gtc aat gag ata atc aat tat ggt gta agt tca ttt gta att ctt gtg Val Asn Glu Ile Ile Asn Tyr Gly Val Ser Ser Phe Val Ile Leu Val 195 200 205	624
ccc ata ggg ctg ata ttt atc tcc tat gtg ctc att gtc tct tcc atc Pro Ile Gly Leu Ile Phe Ile Ser Tyr Val Leu Ile Val Ser Ser Ile 210 215 220	672
ctt aaa att gtg tcc act gaa ggc cag aag aaa gcc ttt gcc acc tgt Leu Lys Ile Val Ser Thr Glu Gly Gln Lys Lys Ala Phe Ala Thr Cys 225 230 235 240	720
gcc tct cat ctc act gtg gtc att gtc cac tat ggc tgt gcc tcc att Ala Ser His Leu Thr Val Val Ile Val His Tyr Gly Cys Ala Ser Ile 245 250 255	768
gcc tac ctc aaa ccc aaa tca gaa agt tca gta gaa aaa gac ctt ctt Ala Tyr Leu Lys Pro Lys Ser Glu Ser Ser Val Glu Lys Asp Leu Leu 260 265 270	816
ctc tct gtg acc tac act atc atc act ccc ttg ctg aac cct gtt gtc Leu Ser Val Thr Tyr Thr Ile Ile Thr Pro Leu Leu Asn Pro Val Val 275 280 285	864
tac agc ctc agg aac aaa gaa gtc aaa gat gct cta tgc aga gct gtg Tyr Ser Leu Arg Asn Lys Glu Val Lys Asp Ala Leu Cys Arg Ala Val 290 295 300	912
ggc aga aac act tct taa Gly Arg Asn Thr Ser 305	930

<210> 22
<211> 309
<212> PRT
<213> M.musculus

<400> 22

Met Gln Arg Asn Asn Phe Thr Glu Val Ile Glu Phe Val Phe Leu Gly
1 5 10 15

Phe Ser Ser Phe Gly Lys His Gln Ile Thr Leu Phe Val Val Phe Leu
20 25 30

Thr Ile Tyr Ile Leu Thr Leu Ala Gly Asn Ile Ile Ile Val Thr Ile
35 40 45

Thr His Ile Asp His His Leu His Thr Pro Met Tyr Phe Phe Leu Ser
50 55 60

Met Leu Ala Ser Ser Glu Thr Val Tyr Thr Leu Val Ile Val Pro Arg
65 70 75 80

Met Leu Ser Ser Leu Ile Phe Tyr Asn Leu Pro Ile Ser Leu Ala Gly
85 90 95

AI012-seqlist-NationalEntry.txt

Cys Ala Thr Gln Met Phe Phe Phe Val Thr Leu Ala Thr Asn Asn Cys
100 105 110

Phe Leu Leu Thr Ala Met Gly Tyr Asp Arg Tyr Val Ala Ile Cys Asn
115 120 125

Pro Leu Arg Tyr Thr Ile Ile Met Ser Lys Gly Met Cys Ala Leu Leu
130 135 140

Val Cys Gly Ser Leu Gly Thr Gly Leu Val Met Ala Val Leu His Val
145 150 155 160

Pro Ala Met Phe His Leu Pro Phe Cys Gly Thr Val Val Glu His Phe
165 170 175

Phe Cys Asp Ile Tyr Pro Val Met Lys Leu Ser Cys Val Asp Thr Thr
180 185 190

Val Asn Glu Ile Ile Asn Tyr Gly Val Ser Ser Phe Val Ile Leu Val
195 200 205

Pro Ile Gly Leu Ile Phe Ile Ser Tyr Val Leu Ile Val Ser Ser Ile
210 215 220

Leu Lys Ile Val Ser Thr Glu Gly Gln Lys Lys Ala Phe Ala Thr Cys
225 230 235 240

Ala Ser His Leu Thr Val Val Ile Val His Tyr Gly Cys Ala Ser Ile
245 250 255

Ala Tyr Leu Lys Pro Lys Ser Glu Ser Ser Val Glu Lys Asp Leu Leu
260 265 270

Leu Ser Val Thr Tyr Thr Ile Ile Thr Pro Leu Leu Asn Pro Val Val
275 280 285

Tyr Ser Leu Arg Asn Lys Glu Val Lys Asp Ala Leu Cys Arg Ala Val
290 295 300

Gly Arg Asn Thr Ser
305

<210> 23
<211> 957
<212> DNA
<213> Mus musculus

AI012-seqlist-NationalEntry.txt

<300>
 <308> AB061229
 <309> 2001-09-07
 <313> (1)..(957)

<220>
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1 5 10 15

ggc ttc tca gat tat cct gac ctt aaa gtc cct ctc ttc ttg gtg ttt      96
Gly Phe Ser Asp Tyr Pro Asp Leu Lys Val Pro Leu Phe Leu Val Phe
20 25 30

ctc gtc att tac agc atc act gtg gta gga aat att ggt atg atc ctc      144
Leu Val Ile Tyr Ser Ile Thr Val Val Gly Asn Ile Gly Met Ile Leu
35 40 45

gtg atc aga att aat ccc caa ctg cac tcc cct atg tac ttc ttc ctc      192
Val Ile Arg Ile Asn Pro Gln Leu His Ser Pro Met Tyr Phe Phe Leu
50 55 60

agc cac ctc tcc ttt gtg gat ttc tgc tat tct tcg atc att gct ccc      240
Ser His Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Ile Ala Pro
65 70 75 80

aag atg ctg gtg aac ctt gtt gca aaa gac ata acc att tca ttt gta      288
Lys Met Leu Val Asn Leu Val Ala Lys Asp Ile Thr Ile Ser Phe Val
85 90 95

gaa tgc ata gta caa tat ttt tta ttt tgt gtc ttt gta gta act gaa      336
Glu Cys Ile Val Gln Tyr Phe Leu Phe Cys Val Phe Val Val Thr Glu
100 105 110

gcc ttt tta tta gtg gtt atg gca tat gac cga ttt gtg gct atc tgt      384
Ala Phe Leu Leu Val Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys
115 120 125

aac cct ctg ctc tac aca gta gcc atg tcc cag aaa ctc tgt atc aca      432
Asn Pro Leu Leu Tyr Thr Val Ala Met Ser Gln Lys Leu Cys Ile Thr
130 135 140

ctg gtg gtg gga tcc tac gca tgg ggg ttc aca tgt tcc ttg aca ctg      480
Leu Val Val Gly Ser Tyr Ala Trp Gly Phe Thr Cys Ser Leu Thr Leu
145 150 155 160

acg tgt tct act gtg caa tta tct ttt cat ggt gtc aat agg atc gat      528
Thr Cys Ser Thr Val Gln Leu Ser Phe His Gly Val Asn Arg Ile Asp
165 170 175

cac ttc ttc tgt gaa ctc tct tca ctg cta gcc ctt tct tcc tct gat      576
His Phe Phe Cys Glu Leu Ser Ser Leu Leu Ala Leu Ser Ser Ser Asp
180 185 190

act ctc atc agt caa tta ctg ctg ttt gtc ttt gcc aca ttt aat gct      624
Thr Leu Ile Ser Gln Leu Leu Leu Phe Val Phe Ala Thr Phe Asn Ala
195 200 205
  
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AI012-seqlist-NationalEntry.txt

gtc	agc	aca	tta	ctc	ctt	att	ctg	ttg	tct	tac	ctg	ttc	att	gtt	gtc	672
Val	Ser	Thr	Leu	Leu	Leu	Ile	Leu	Leu	Ser	Tyr	Leu	Phe	Ile	Val	Val	
210						215					220					
act	gtt	ctt	aag	atg	cgt	tca	gcc	agt	ggg	cgt	cgt	aag	gct	ttc	tcc	720
Thr	Val	Leu	Lys	Met	Arg	Ser	Ala	Ser	Gly	Arg	Arg	Lys	Ala	Phe	Ser	
225					230					235					240	
acc	tgt	gca	tcc	cat	ctg	gca	gcc	atc	act	atc	ttc	cat	ggt	acc	att	768
Thr	Cys	Ala	Ser	His	Leu	Ala	Ala	Ile	Thr	Ile	Phe	His	Gly	Thr	Ile	
				245					250					255		
tta	ttc	ctt	ttt	tgt	gtt	ccc	aac	tct	aag	aat	tcc	agg	ctc	aca	gtc	816
Leu	Phe	Leu	Phe	Cys	Val	Pro	Asn	Ser	Lys	Asn	Ser	Arg	Leu	Thr	Val	
			260					265					270			
aaa	gtg	ggc	tct	gtg	ttt	tac	aca	gtg	gtg	atc	ccc	atg	ctt	aac	ccc	864
Lys	Val	Gly	Ser	Val	Phe	Tyr	Thr	Val	Val	Ile	Pro	Met	Leu	Asn	Pro	
		275					280					285				
ata	atc	tat	agt	ctg	aga	aat	aag	gat	gtc	caa	gat	act	att	aga	aaa	912
Ile	Ile	Tyr	Ser	Leu	Arg	Asn	Lys	Asp	Val	Gln	Asp	Thr	Ile	Arg	Lys	
		290				295					300					
ata	atg	acc	ctt	atc	tca	tgt	gtt	aag	aat	gat	aga	cac	aat	taa		957
Ile	Met	Thr	Leu	Ile	Ser	Cys	Val	Lys	Asn	Asp	Arg	His	Asn			
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 1 5 10 15

Gly Phe Ser Asp Tyr Pro Asp Leu Lys Val Pro Leu Phe Leu Val Phe
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Leu Val Ile Tyr Ser Ile Thr Val Val Gly Asn Ile Gly Met Ile Leu
 35 40 45

Val Ile Arg Ile Asn Pro Gln Leu His Ser Pro Met Tyr Phe Phe Leu
 50 55 60

Ser His Leu Ser Phe Val Asp Phe Cys Tyr Ser Ser Ile Ile Ala Pro
 65 70 75 80

Lys Met Leu Val Asn Leu Val Ala Lys Asp Ile Thr Ile Ser Phe Val
 85 90 95

Glu Cys Ile Val Gln Tyr Phe Leu Phe Cys Val Phe Val Val Thr Glu
 100 105 110

AI012-seqlist-NationalEntry.txt

Ala Phe Leu Leu Val Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys
115 120 125

Asn Pro Leu Leu Tyr Thr Val Ala Met Ser Gln Lys Leu Cys Ile Thr
130 135 140

Leu Val Val Gly Ser Tyr Ala Trp Gly Phe Thr Cys Ser Leu Thr Leu
145 150 155 160

Thr Cys Ser Thr Val Gln Leu Ser Phe His Gly Val Asn Arg Ile Asp
165 170 175

His Phe Phe Cys Glu Leu Ser Ser Leu Leu Ala Leu Ser Ser Ser Asp
180 185 190

Thr Leu Ile Ser Gln Leu Leu Leu Phe Val Phe Ala Thr Phe Asn Ala
195 200 205

Val Ser Thr Leu Leu Leu Ile Leu Leu Ser Tyr Leu Phe Ile Val Val
210 215 220

Thr Val Leu Lys Met Arg Ser Ala Ser Gly Arg Arg Lys Ala Phe Ser
225 230 235 240

Thr Cys Ala Ser His Leu Ala Ala Ile Thr Ile Phe His Gly Thr Ile
245 250 255

Leu Phe Leu Phe Cys Val Pro Asn Ser Lys Asn Ser Arg Leu Thr Val
260 265 270

Lys Val Gly Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro
275 280 285

Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val Gln Asp Thr Ile Arg Lys
290 295 300

Ile Met Thr Leu Ile Ser Cys Val Lys Asn Asp Arg His Asn
305 310 315

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<313> (1)..(1344)

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atg gac aga tcc aat gag acc gcc ccc ctg tcc ggc ttc att ctc ctg 108
Met Asp Arg Ser Asn Glu Thr Ala Pro Leu Ser Gly Phe Ile Leu Leu
1 5 10 15

ggc ctc tct gcc cac cca aag ctg gag aaa acc ttc ttc gtg ctc atc 156
Gly Leu Ser Ala His Pro Lys Leu Glu Lys Thr Phe Phe Val Leu Ile
20 25 30

ctg atg atg tac ctg gtg atc ctg ctg ggc aac ggc gtc ctc atc ctg 204
Leu Met Met Tyr Leu Val Ile Leu Leu Gly Asn Gly Val Leu Ile Leu
35 40 45

gtg agc atc ctc gac tcc cac ctg cac acg ccc atg tac ttc ttc ctg 252
Val Ser Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu
50 55 60

ggg aac ctc tcc ttc ctg gac atc tgc tac act acc tcc tct gtc ccc 300
Gly Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Ser Ser Val Pro
65 70 75 80

ctc att ctg gac agc ttt ctg act ccc agg aag acc atc tcc ttc tcg 348
Leu Ile Leu Asp Ser Phe Leu Thr Pro Arg Lys Thr Ile Ser Phe Ser
85 90 95

ggc tgt gcc gtg cag atg ttt ctc tcc ttc gcc atg gga gcc acg gag 396
Gly Cys Ala Val Gln Met Phe Leu Ser Phe Ala Met Gly Ala Thr Glu
100 105 110

tgt gtg ctc ctg agt atg atg gcg ttt gat cgt tat gtg gcc atc tgc 444
Cys Val Leu Leu Ser Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys
115 120 125

aac ccc ctt aga tat cct gtg gtc atg aac aag gct gcc tat gtg ccc 492
Asn Pro Leu Arg Tyr Pro Val Val Met Asn Lys Ala Ala Tyr Val Pro
130 135 140

atg gct gcc agt tcc tgg gca ggt ggt atc act aat tct gta gtg cag 540
Met Ala Ala Ser Ser Trp Ala Gly Gly Ile Thr Asn Ser Val Val Gln
145 150 155 160

aca tct ttg gca atg cgg ctg ccc ttc tgt ggg gac aat gtc atc aat 588
Thr Ser Leu Ala Met Arg Leu Pro Phe Cys Gly Asp Asn Val Ile Asn
165 170 175

cac ttc acc tgt gag atc ctg gca gtc ctg aaa ctg gcc tgt gct gac 636
His Phe Thr Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp
180 185 190

atc tcc atc aat gtc atc agc atg gtt gtg gcc aac atg atc ttc ttg 684
Ile Ser Ile Asn Val Ile Ser Met Val Val Ala Asn Met Ile Phe Leu
195 200 205

gca gtc cca gtc ctc ttc atc ttt gtc tcc tat gtc ttc atc ctt gtg 732
Ala Val Pro Val Leu Phe Ile Phe Val Ser Tyr Val Phe Ile Leu Val
210 215 220

AI012-seqlist-NationalEntry.txt

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acc tgc tct gcc cac ctc acc gtg gta ctt gtc ttc tat gga acc atc Thr Cys Ser Ala His Leu Thr Val Val Leu Val Phe Tyr Gly Thr Ile 245 250 255	828
ctc ttc atg tac ggg aag ccc aag tcc aag gac cca ctg ggg gca gac Leu Phe Met Tyr Gly Lys Pro Lys Ser Lys Asp Pro Leu Gly Ala Asp 260 265 270	876
aag cag gac ctt gca gac aag ctc atc tcc ctc ttc tat gga gtg gtg Lys Gln Asp Leu Ala Asp Lys Leu Ile Ser Leu Phe Tyr Gly Val Val 275 280 285	924
acc ccc atg cta aac ccc atc atc tac agc ttg aga aac aag gac gtg Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val 290 295 300	972
agg gct gct gtg agg aac ctg gtg ggc cag aaa cac cta act gag tga Arg Ala Ala Val Arg Asn Leu Val Gly Gln Lys His Leu Thr Glu 305 310 315	1020
ctgtcacagt gcagaacttc caacctcttc atttgtgtttg tgagggaaga gtggtgcaat	1080
gaagaggagc cacttcccca aggtccaagt aatgaactca gaactaagac tataaacaaa	1140
ctatcaacgt tccttaagca ccaatgcttc tagttaacag gctggaagga caagccttta	1200
cacctttgga gagaatggct ggttgtcagc tttgtgttca accttagtgg cgtcgtagaa	1260
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Gly Leu Ser Ala His Pro Lys Leu Glu Lys Thr Phe Phe Val Leu Ile 20 25 30
Leu Met Met Tyr Leu Val Ile Leu Leu Gly Asn Gly Val Leu Ile Leu 35 40 45
Val Ser Ile Leu Asp Ser His Leu His Thr Pro Met Tyr Phe Phe Leu 50 55 60
Gly Asn Leu Ser Phe Leu Asp Ile Cys Tyr Thr Thr Ser Ser Val Pro 65 70 75 80

AI012-seqlist-NationalEntry.txt

Leu Ile Leu Asp Ser Phe Leu Thr Pro Arg Lys Thr Ile Ser Phe Ser
85 90 95

Gly Cys Ala Val Gln Met Phe Leu Ser Phe Ala Met Gly Ala Thr Glu
100 105 110

Cys Val Leu Leu Ser Met Met Ala Phe Asp Arg Tyr Val Ala Ile Cys
115 120 125

Asn Pro Leu Arg Tyr Pro Val Val Met Asn Lys Ala Ala Tyr Val Pro
130 135 140

Met Ala Ala Ser Ser Trp Ala Gly Gly Ile Thr Asn Ser Val Val Gln
145 150 155 160

Thr Ser Leu Ala Met Arg Leu Pro Phe Cys Gly Asp Asn Val Ile Asn
165 170 175

His Phe Thr Cys Glu Ile Leu Ala Val Leu Lys Leu Ala Cys Ala Asp
180 185 190

Ile Ser Ile Asn Val Ile Ser Met Val Val Ala Asn Met Ile Phe Leu
195 200 205

Ala Val Pro Val Leu Phe Ile Phe Val Ser Tyr Val Phe Ile Leu Val
210 215 220

Thr Ile Leu Arg Ile Pro Ser Ala Glu Gly Arg Lys Lys Ala Phe Ser
225 230 235 240

Thr Cys Ser Ala His Leu Thr Val Val Leu Val Phe Tyr Gly Thr Ile
245 250 255

Leu Phe Met Tyr Gly Lys Pro Lys Ser Lys Asp Pro Leu Gly Ala Asp
260 265 270

Lys Gln Asp Leu Ala Asp Lys Leu Ile Ser Leu Phe Tyr Gly Val Val
275 280 285

Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val
290 295 300

Arg Ala Ala Val Arg Asn Leu Val Gly Gln Lys His Leu Thr Glu
305 310 315

<210> 27

AI012-seq1ist-NationalEntry.txt

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<213> Mus musculus

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<309> 1999-02-08
<313> (1)..(942)

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1                               5               10              15

gat gcc tgt gag ctg cag gtg ctc ata ttc ctg ggc ttt ctc ctg acc      96
Asp Ala Cys Glu Leu Gln Val Leu Ile Phe Leu Gly Phe Leu Leu Thr
                20                   25              30

tac ttc ctc att ctg ctg gga aac ttc ctc atc atc ttc atc acc ctt     144
Tyr Phe Leu Ile Leu Leu Gly Asn Phe Leu Ile Ile Phe Ile Thr Leu
                35                   40              45

gtg gac agg cgc ctt tac acc ccc atg tat tac ttc ctc cgc aac ttt     192
Val Asp Arg Arg Leu Tyr Thr Pro Met Tyr Tyr Phe Leu Arg Asn Phe
                50                   55              60

gcc atg ctg gag atc tgg ttc acc tct gtc atc ttc ccc aag atg cta     240
Ala Met Leu Glu Ile Trp Phe Thr Ser Val Ile Phe Pro Lys Met Leu
65                               70               75              80

acc aac atc atc aca gga cat aag acc atc tcc cta cta ggt tgt ttc     288
Thr Asn Ile Ile Thr Gly His Lys Thr Ile Ser Leu Leu Gly Cys Phe
                85                   90              95

ctc caa gca ttc ctc tat ttc ttc ctt ggc acc act gag ttc ttt cta     336
Leu Gln Ala Phe Leu Tyr Phe Phe Leu Gly Thr Thr Glu Phe Phe Leu
                100                  105             110

ctg gca gtg atg tcc ttt gac agg tat gtg gcc att tgt aac cct ttg     384
Leu Ala Val Met Ser Phe Asp Arg Tyr Val Ala Ile Cys Asn Pro Leu
                115                  120             125

cgt tat gcc acc att atg agc aaa aga gtc tgt gtc cag ctt gtg ttt     432
Arg Tyr Ala Thr Ile Met Ser Lys Arg Val Cys Val Gln Leu Val Phe
                130                  135             140

tgc tca tgg atg tct gga ttg ctt ctc atc ata gtt cct agt tca att     480
Cys Ser Trp Met Ser Gly Leu Leu Leu Ile Ile Val Pro Ser Ser Ile
145                               150              155             160

gta ttt cag cag cca ttc tgt ggc cca aac atc att aat cat ttc ttc     528
Val Phe Gln Gln Pro Phe Cys Gly Pro Asn Ile Ile Asn His Phe Phe
                165                  170             175

tgt gac aac ttt cca ctt atg gaa ctc ata tgt gca gat act agc ctg     576
Cys Asp Asn Phe Pro Leu Met Glu Leu Ile Cys Ala Asp Thr Ser Leu
                180                  185             190

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AI012-seqlist-NationalEntry.txt

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Val	Glu	Phe	Leu	Gly	Phe	Val	Ile	Ala	Asn	Phe	Ser	Leu	Leu	Gly	Thr	
		195					200					205				
ctg	gct	gtg	act	gcc	acc	tgc	tat	ggc	cac	att	ctc	tat	acc	att	cta	672
Leu	Ala	Val	Thr	Ala	Thr	Cys	Tyr	Gly	His	Ile	Leu	Tyr	Thr	Ile	Leu	
	210					215					220					
cac	att	cct	tca	gcc	aag	gag	agg	aag	aaa	gcc	ttc	tca	act	tgc	tcc	720
His	Ile	Pro	Ser	Ala	Lys	Glu	Arg	Lys	Lys	Ala	Phe	Ser	Thr	Cys	Ser	
225					230					235					240	
tct	cat	att	att	gtg	gtg	tct	ctc	ttc	tac	ggc	agc	tgt	atc	ttc	atg	768
Ser	His	Ile	Ile	Val	Val	Ser	Leu	Phe	Tyr	Gly	Ser	Cys	Ile	Phe	Met	
				245					250					255		
tat	gtc	cgg	tct	ggc	aag	aat	gga	cag	ggg	gag	gat	cat	aac	aag	gtg	816
Tyr	Val	Arg	Ser	Gly	Lys	Asn	Gly	Gln	Gly	Glu	Asp	His	Asn	Lys	Val	
			260					265					270			
gtg	gca	ttg	ctc	aac	act	gta	gtg	aca	ccc	aca	ctc	aac	ccc	ttc	atc	864
Val	Ala	Leu	Leu	Asn	Thr	Val	Val	Thr	Pro	Thr	Leu	Asn	Pro	Phe	Ile	
		275					280					285				
tac	act	ctg	agg	aac	aag	cag	gtg	aag	cag	gta	ttt	agg	gaa	cac	gta	912
Tyr	Thr	Leu	Arg	Asn	Lys	Gln	Val	Lys	Gln	Val	Phe	Arg	Glu	His	Val	
	290					295					300					
agc	aag	ttc	caa	aag	ttc	agc	cag	acg	tga							942
Ser	Lys	Phe	Gln	Lys	Phe	Ser	Gln	Thr								
305					310											

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 <212> PRT
 <213> Mus musculus.

<400> 28

Met	Ala	Asn	Ser	Thr	Thr	Val	Thr	Glu	Phe	Ile	Leu	Leu	Gly	Leu	Ser	
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Asp	Ala	Cys	Glu	Leu	Gln	Val	Leu	Ile	Phe	Leu	Gly	Phe	Leu	Leu	Thr	
			20					25				30				
Tyr	Phe	Leu	Ile	Leu	Leu	Gly	Asn	Phe	Leu	Ile	Ile	Phe	Ile	Thr	Leu	
		35				40					45					
Val	Asp	Arg	Arg	Leu	Tyr	Thr	Pro	Met	Tyr	Tyr	Phe	Leu	Arg	Asn	Phe	
	50					55					60					
Ala	Met	Leu	Glu	Ile	Trp	Phe	Thr	Ser	Val	Ile	Phe	Pro	Lys	Met	Leu	
65					70					75					80	
Thr	Asn	Ile	Ile	Thr	Gly	His	Lys	Thr	Ile	Ser	Leu	Leu	Gly	Cys	Phe	
				85					90					95		

AI012-seqlist-NationalEntry.txt

Leu Gln Ala Phe Leu Tyr Phe Phe Leu Gly Thr Thr Glu Phe Phe Leu
100 105 110

Leu Ala Val Met Ser Phe Asp Arg Tyr Val Ala Ile Cys Asn Pro Leu
115 120 125

Arg Tyr Ala Thr Ile Met Ser Lys Arg Val Cys Val Gln Leu Val Phe
130 135 140

Cys Ser Trp Met Ser Gly Leu Leu Leu Ile Ile Val Pro Ser Ser Ile
145 150 155 160

Val Phe Gln Gln Pro Phe Cys Gly Pro Asn Ile Ile Asn His Phe Phe
165 170 175

Cys Asp Asn Phe Pro Leu Met Glu Leu Ile Cys Ala Asp Thr Ser Leu
180 185 190

Val Glu Phe Leu Gly Phe Val Ile Ala Asn Phe Ser Leu Leu Gly Thr
195 200 205

Leu Ala Val Thr Ala Thr Cys Tyr Gly His Ile Leu Tyr Thr Ile Leu
210 215 220

His Ile Pro Ser Ala Lys Glu Arg Lys Lys Ala Phe Ser Thr Cys Ser
225 230 235 240

Ser His Ile Ile Val Val Ser Leu Phe Tyr Gly Ser Cys Ile Phe Met
245 250 255

Tyr Val Arg Ser Gly Lys Asn Gly Gln Gly Glu Asp His Asn Lys Val
260 265 270

Val Ala Leu Leu Asn Thr Val Val Thr Pro Thr Leu Asn Pro Phe Ile
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290 295 300

Ser Lys Phe Gln Lys Phe Ser Gln Thr
305 310

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AI012-seq1ist-NationalEntry.txt

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1				5					10					15		

aag	gcg	ctg	gtt	ggt	cta	ctg	tct	gag	gaa	aac	acc	acc	tcc	ttc	aaa	96
Lys	Ala	Leu	Val	Gly	Leu	Leu	Ser	Glu	Glu	Asn	Thr	Thr	Ser	Phe	Lys	
			20					25					30			

ggg	tgc	atg	act	cag	ctc	ttc	ttt	ctt	gtg	tgg	tct	gga	tcc	tct	gag	144
Gly	Cys	Met	Thr	Gln	Leu	Phe	Phe	Leu	Val	Trp	Ser	Gly	Ser	Ser	Glu	
		35					40					45				

ctg	ctg	ctg	ctc	aca	gtc	atg	gcc	tat	gac	cgc	tat	gtg	gcc	atc	tgt	192
Leu	Leu	Leu	Leu	Thr	Val	Met	Ala	Tyr	Asp	Arg	Tyr	Val	Ala	Ile	Cys	
		50				55					60					

ttg	ccc	ctg	cat	tac	agc	tct	agg	atg	agt	cca	cag	ctc	tgt	ggg	acc	240
Leu	Pro	Leu	His	Tyr	Ser	Ser	Arg	Met	Ser	Pro	Gln	Leu	Cys	Gly	Thr	
65					70					75					80	

ttt	gcc	gtg	ggt	gta	tgg	tcc	atc	tgc	gca	cta	aat	gca	tct	atc	aac	288
Phe	Ala	Val	Gly	Val	Trp	Ser	Ile	Cys	Ala	Leu	Asn	Ala	Ser	Ile	Asn	
			85					90						95		

act	ggt	ctg	atg	aca	cgg	ctg	tca	ttc	tgt	ggc	ccc	aag	gtc	atc	acc	336
Thr	Gly	Leu	Met	Thr	Arg	Leu	Ser	Phe	Cys	Gly	Pro	Lys	Val	Ile	Thr	
			100					105					110			

cac	ttc	ttc	tgt	gag	att	ccc	cca	ctc	ctc	ctg	ctc	tcc	tgt	agt	cct	384
His	Phe	Phe	Cys	Glu	Ile	Pro	Pro	Leu	Leu	Leu	Leu	Ser	Cys	Ser	Pro	
		115					120					125				

aca	tat	ata	aat	agc	gtt	atg	act	ctt	gtg	gca	gat	gcc	ttt	tat	gga	432
Thr	Tyr	Ile	Asn	Ser	Val	Met	Thr	Leu	Val	Ala	Asp	Ala	Phe	Tyr	Gly	
		130				135					140					

ggc	atc	aat	ttt	tta	ctt	acc	ttg	cta	tcc	tat	ggc	tgc	atc	att	gcc	480
Gly	Ile	Asn	Phe	Leu	Leu	Thr	Leu	Leu	Ser	Tyr	Gly	Cys	Ile	Ile	Ala	
145					150					155					160	

agc	atc	ctg	cgc	atg	cgt	tct	gct	gag	ggc	aag	agg	aag	gcc	ttt	tct	528
Ser	Ile	Leu	Arg	Met	Arg	Ser	Ala	Glu	Gly	Lys	Arg	Lys	Ala	Phe	Ser	
				165					170					175		

acc	tgc	tca	tcc	cac	ctc	att	gtg	gtc	tct	gtg	tac	tac	tca	tct	gtg	576
Thr	Cys	Ser	Ser	His	Leu	Ile	Val	Val	Ser	Val	Tyr	Tyr	Ser	Ser	Val	
			180					185					190			

ttc	tgt	gcc	tat	gtc	agc	cct	gct	tct	agc	tac	agc	cca	gaa	aga	agc	624
Phe	Cys	Ala	Tyr	Val	Ser	Pro	Ala	Ser	Ser	Tyr	Ser	Pro	Glu	Arg	Ser	
		195					200					205				

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 Lys Val Ser Ser Val Leu Tyr Ser Val Leu Ser Pro Thr Leu Asn
 210 215 220

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 <213> Mus musculus

<400> 30

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 20 25 30

Gly Cys Met Thr Gln Leu Phe Phe Leu Val Trp Ser Gly Ser Ser Glu
 35 40 45

Leu Leu Leu Leu Thr Val Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys
 50 55 60

Leu Pro Leu His Tyr Ser Ser Arg Met Ser Pro Gln Leu Cys Gly Thr
 65 70 75 80

Phe Ala Val Gly Val Trp Ser Ile Cys Ala Leu Asn Ala Ser Ile Asn
 85 90 95

Thr Gly Leu Met Thr Arg Leu Ser Phe Cys Gly Pro Lys Val Ile Thr
 100 105 110

His Phe Phe Cys Glu Ile Pro Pro Leu Leu Leu Leu Ser Cys Ser Pro
 115 120 125

Thr Tyr Ile Asn Ser Val Met Thr Leu Val Ala Asp Ala Phe Tyr Gly
 130 135 140

Gly Ile Asn Phe Leu Leu Thr Leu Leu Ser Tyr Gly Cys Ile Ile Ala
 145 150 155 160

Ser Ile Leu Arg Met Arg Ser Ala Glu Gly Lys Arg Lys Ala Phe Ser
 165 170 175

Thr Cys Ser Ser His Leu Ile Val Val Ser Val Tyr Tyr Ser Ser Val
 180 185 190

Phe Cys Ala Tyr Val Ser Pro Ala Ser Ser Tyr Ser Pro Glu Arg Ser
 195 200 205

AI012-seqlist-NationalEntry.txt

Lys Val Ser Ser Val Leu Tyr Ser Val Leu Ser Pro Thr Leu Asn
210 215 220

<210> 31
<211> 1661
<212> DNA
<213> Mus musculus

<300>
<308> AF121974
<309> 1999-04-25
<313> (1)..(1661)

<220>
<221> misc_feature
<222> (3)..(3)
<223> n is a, c, g, or t

<220>
<221> CDS
<222> (303)..(1307)

<400> 31
gtntacatag tgagttcgag gccagccagg gctacacaga caaacctgt ctcgaaaaac 60
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atggaaagta gctacttcta acatacaact cttcatttcc tccatagaaa tgctgtagtt 180
aatgtctaca cccagtccag cctgggtgagg ctggggcagg tcctagcagg gcctttcagg 240
gactgaaccc cggcacccctg cccctcccct ctccctggag cctccccaag ccctcaggcg 300
tc atg tca ggg tgg agc aat ggc acc tac aat gag tcc tac acc agc 347
Met Ser Gly Trp Ser Asn Gly Thr Tyr Asn Glu Ser Tyr Thr Ser
1 5 10 15
ttc ctc ctc atg ggc ttc cca ggg atg cag gaa gcc aga gcc ctc ctg 395
Phe Leu Leu Met Gly Phe Pro Gly Met Gln Glu Ala Arg Ala Leu Leu
20 25 30
gtg ctg ccc ttc ctc agc ctc tac ctg gtg atc ctc ttc acc aat gcc 443
Val Leu Pro Phe Leu Ser Leu Tyr Leu Val Ile Leu Phe Thr Asn Ala
35 40 45
ctg gtc atc cac acg gtg gca tcc cag cgc agc ctg cac cag ccc atg 491
Leu Val Ile His Thr Val Ala Ser Gln Arg Ser Leu His Gln Pro Met
50 55 60
tac ctg ctc att gcc ctg ctc ctg gct gtc aat atc tgc gct gcc acc 539
Tyr Leu Leu Ile Ala Leu Leu Leu Ala Val Asn Ile Cys Ala Ala Thr
65 70 75
acc gtg gtg ccc ccc atg ctc ttc agc ttc tcc aca cgc ttc aac cgc 587
Thr Val Val Pro Pro Met Leu Phe Ser Phe Ser Thr Arg Phe Asn Arg
80 85 90 95
atc tcc ctc cct cga tgc ttg gga caa atg ttc tgc atc tac ttc ctt 635
Ile Ser Leu Pro Arg Cys Leu Gly Gln Met Phe Cys Ile Tyr Phe Leu
100 105 110

AI012-seqlist-NationalEntry.txt

att gtc ttt gac tgc aac atc ctc ctg gtc atg gct cta gat cgc tat Ile Val Phe Asp Cys Asn Ile Leu Leu Val Met Ala Leu Asp Arg Tyr 115 120 125	683
gtg gct atc tgc tac cct ctc cgc tac cca gaa ata gtg aca gga cag Val Ala Ile Cys Tyr Pro Leu Arg Tyr Pro Glu Ile Val Thr Gly Gln 130 135 140	731
tta ctg gct ggt ctg gtg gtg ctg gca gtc acc agg agc aca agc att Leu Leu Ala Gly Leu Val Val Leu Ala Val Thr Arg Ser Thr Ser Ile 145 150 155	779
gtt gct cca gtg gtg gtg ctg gcc tcg cgg gtt cgc ttc tgt cgc tca Val Ala Pro Val Val Val Leu Ala Ser Arg Val Arg Phe Cys Arg Ser 160 165 170 175	827
gat gtg atc cgc cac ttt gcc tgt gag cac atg gcc ctg atg aag ctt Asp Val Ile Arg His Phe Ala Cys Glu His Met Ala Leu Met Lys Leu 180 185 190	875
tcc tgt ggg gac atc tcg ctg aat aag acg gtg gga ctc act gtt cgc Ser Cys Gly Asp Ile Ser Leu Asn Lys Thr Val Gly Leu Thr Val Arg 195 200 205	923
atc ttc aac cga gtc ctg gat atg ctc ctg tta ggt gcc tcc tac tcc Ile Phe Asn Arg Val Leu Asp Met Leu Leu Leu Gly Ala Ser Tyr Ser 210 215 220	971
cgc atc atc cat gct gcc ttc agg atc tca tca ggt gga gca cgg tcc Arg Ile Ile His Ala Ala Phe Arg Ile Ser Ser Gly Gly Ala Arg Ser 225 230 235	1019
aaa gcc ctg aac acc tgt ggc tcc cac ctg ctg gtc atc ttc acc gtc Lys Ala Leu Asn Thr Cys Gly Ser His Leu Leu Val Ile Phe Thr Val 240 245 250 255	1067
tac tcc tcc acc atg tcc tca tcc att gtc tac cgt gtg gca cgc act Tyr Ser Ser Thr Met Ser Ser Ile Val Tyr Arg Val Ala Arg Thr 260 265 270	1115
gcc tcc caa gat gtg cac aac ttg ctt agt gct ttc tat ctg ttg ctc Ala Ser Gln Asp Val His Asn Leu Leu Ser Ala Phe Tyr Leu Leu Leu 275 280 285	1163
ccc tgt ctg gtc aac ccc atc atc tac ggg gcc aga acc aag gaa atc Pro Cys Leu Val Asn Pro Ile Ile Tyr Gly Ala Arg Thr Lys Glu Ile 290 295 300	1211
agg cag cac ctg gta gct ctg ttc caa agg act cag caa cag gtc ttc Arg Gln His Leu Val Ala Leu Phe Gln Arg Thr Gln Gln Val Phe 305 310 315	1259
act gag aag ccc cag tcc ctg ccc tcg aat aga gag ctt cct gga tga Thr Glu Lys Pro Gln Ser Leu Pro Ser Asn Arg Glu Leu Pro Gly 320 325 330	1307
ttgtccagaa tttgtgggtc tcaaaatcac tttcactatt cagtgaagga ggggcattca	1367
agtgggcatt cgtctctggt atattttgtc tcggctatatt tagttcagca tcctatttat	1427
gagaagggtc tattctatat ctccagctgt ctagaactcc ttaagtggcc caggatgacc	1487

AI012-seqlist-NationalEntry.txt

tggaacccaa acaattctcc tttcttagtt tgccaaatgc tagcattaga ggcattgagtc 1547
acagtgcctg gcttatctgc actcatactg gagagcctca tgtctgcttt ccaaaaagca 1607
cctactcact ctgaactagc aactgaaagc aagctctaac cctggcttga agtt 1661

<210> 32
<211> 334
<212> PRT
<213> Mus musculus

<400> 32

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1 5 10 15

Leu Leu Met Gly Phe Pro Gly Met Gln Glu Ala Arg Ala Leu Leu Val
20 25 30

Leu Pro Phe Leu Ser Leu Tyr Leu Val Ile Leu Phe Thr Asn Ala Leu
35 40 45

Val Ile His Thr Val Ala Ser Gln Arg Ser Leu His Gln Pro Met Tyr
50 55 60

Leu Leu Ile Ala Leu Leu Leu Ala Val Asn Ile Cys Ala Ala Thr Thr
65 70 75 80

Val Val Pro Pro Met Leu Phe Ser Phe Ser Thr Arg Phe Asn Arg Ile
85 90 95

Ser Leu Pro Arg Cys Leu Gly Gln Met Phe Cys Ile Tyr Phe Leu Ile
100 105 110

Val Phe Asp Cys Asn Ile Leu Leu Val Met Ala Leu Asp Arg Tyr Val
115 120 125

Ala Ile Cys Tyr Pro Leu Arg Tyr Pro Glu Ile Val Thr Gly Gln Leu
130 135 140

Leu Ala Gly Leu Val Val Leu Ala Val Thr Arg Ser Thr Ser Ile Val
145 150 155 160

Ala Pro Val Val Val Leu Ala Ser Arg Val Arg Phe Cys Arg Ser Asp
165 170 175

Val Ile Arg His Phe Ala Cys Glu His Met Ala Leu Met Lys Leu Ser
180 185 190

Cys Gly Asp Ile Ser Leu Asn Lys Thr Val Gly Leu Thr Val Arg Ile
200 205 210

195

Phe Asn Arg Val Leu Asp Met Leu Leu Leu Gly Ala Ser Tyr Ser Arg
210 215 220
Ile Ile His Ala Ala Phe Arg Ile Ser Ser Gly Gly Ala Arg Ser Lys
225 230 235 240
Ala Leu Asn Thr Cys Gly Ser His Leu Leu Val Ile Phe Thr Val Tyr
245 250 255
Ser Ser Thr Met Ser Ser Ser Ile Val Tyr Arg Val Ala Arg Thr Ala
260 265 270
Ser Gln Asp Val His Asn Leu Leu Ser Ala Phe Tyr Leu Leu Leu Pro
275 280 285
Cys Leu Val Asn Pro Ile Ile Tyr Gly Ala Arg Thr Lys Glu Ile Arg
290 295 300
Gln His Leu Val Ala Leu Phe Gln Arg Thr Gln Gln Gln Val Phe Thr
305 310 315 320
Glu Lys Pro Gln Ser Leu Pro Ser Asn Arg Glu Leu Pro Gly
325 330

<210> 33
<211> 1116
<212> DNA
<213> Mus musculus

<300>
<308> AF121975
<309> 1999-04-25
<313> (1)..(1116)

<220>
<221> misc_feature
<222> (15)..(15)
<223> n is a, c, g, or t

<220>
<221> CDS
<222> (50)..(1015)

<400> 33
caagctggct cttcntactg tctctccatt agtttttagtc gtcacggga atg aat tca 58
Met Asn Ser
1

aaa gca agc atg ctt gga act aac ttc act atc atc cat cca act gtg 106
Lys Ala Ser Met Leu Gly Thr Asn Phe Thr Ile Ile His Pro Thr Val
5 10 15

AI012-seqlist-NationalEntry.txt

ttc atc ctg ctt gga atc cca ggg ctg gag cag tac cac acc tgg ctt Phe Ile Leu Leu Gly Ile 25 Pro Gly Leu Glu Gln Tyr His Thr Trp Leu 35	154
tct att cct ttt tgt ctt atg tac att gct gca gtc ttg ggg aac gga Ser Ile Pro Phe Cys 40 Leu Met Tyr Ile Ala 45 Val Leu Gly Asn 50 Gly	202
gcc ctc atc ctt gtt gtc ctg agt gaa cgc acc ctc cat gag ccc atg Ala Leu Ile Leu Val Val Leu Ser Glu 60 Arg Thr Leu His Glu 65 Pro Met	250
tat gtc ttt ctg tcc atg ctg gct ggc act gat att ctc ctg tca acc Tyr Val Phe 70 Leu Ser Met Leu 75 Gly Thr Asp Ile 80 Leu Ser Thr	298
acc act gtg cct aag acc ttg gct atc ttt tgg ttc cat gct ggg gag Thr Thr Val Pro Lys Thr Leu 90 Ala Ile Phe Trp Phe 95 His Ala Gly Glu	346
atc ccc ttt gat gcc tgc att gct cag atg ttt ttc atc cac gtt gct Ile Pro Phe Asp Ala Cys 105 Ile Ala Gln Met Phe 110 Phe Ile His Val Ala 115	394
ttt gtg gct gag tgc gga atc ctt ctg gcc atg gca ttt gac cga tat Phe Val Ala Glu Ser 120 Gly Ile Leu Leu Ala 125 Met Ala Phe Asp Arg 130 Tyr	442
gtg gct att tgt act cct ctg aga tac tca gcc gtc tta aca cct atg Val Ala Ile Cys Thr Pro Leu Arg Tyr 140 Ser Ala Val Leu Thr 145 Pro Met	490
gca att gga aaa atg acc ctg gcc atc tgg gga cgg agc att ggg aca Ala Ile Gly Lys Met Thr Leu Ala 155 Ile Trp Gly Arg Ser 160 Ile Gly Thr	538
att ttc cct atc ata ttt ctg ctg aag agg ctg tca tac tgc agg acc Ile Phe Pro Ile Ile Phe Leu 170 Leu Lys Arg Leu Ser 175 Tyr Cys Arg Thr	586
aat gtc atc cca cac tca tat tgt gag cat att ggt gta gcc aga ttg Asn Val Ile Pro His Ser 185 Tyr Cys Glu His Ile Gly Val Ala Arg Leu 195	634
gct tgt gct gac atc act gtc aat atc tgg tat ggc ttc tcg gtg cca Ala Cys Ala Asp Ile Thr Val Asn Ile Trp 205 Tyr Gly Phe Ser Val Pro 210	682
atg gct tca gtt ttg gta gat gtt gca ctc att ggt att tct tat acg Met Ala Ser Val 215 Leu Val Asp Val Ala 220 Leu Ile Gly Ile Ser Tyr Thr	730
ttg atc ctc cag gct gtg ttt aga ctt cct tcc cag gat gct agg cac Leu Ile Leu Gln Ala Val Phe Arg 235 Leu Pro Ser Gln Asp 240 Ala Arg His	778
aag gcc ctc aat acc tgt ggt tct cac att ggg gtc att ctc ctc ttt Lys Ala Leu Asn Thr Cys Gly Ser His Ile Gly Val 255 Ile Leu Leu Phe	826
ttc ata cca tca ttt ttt act ttc ctt act cat cgc ttt ggc aag aac Phe Ile Pro Ser Phe Phe Thr Phe Leu Thr His Arg Phe Gly Lys Asn	874

AI012-seqlist-NationalEntry.txt

260 265 270 275
 atc ccc cac cat gtg cac att ctt ctg gca aat ctc tat gtg ttg gtt 922
 Ile Pro His His Val His Ile Leu Leu Ala Asn Leu Tyr Val Leu Val
 280 285 290
 ccc ccc atg ctt aac cct atc atc tat ggt gct aag acc aag caa att 970
 Pro Pro Met Leu Asn Pro Ile Ile Tyr Gly Ala Lys Thr Lys Gln Ile
 295 300 305
 agg gac agc atg act cgc atg ttg tct gtt gtg tgg aag tct tga 1015
 Arg Asp Ser Met Thr Arg Met Leu Ser Val Val Trp Lys Ser
 310 315 320
 gagcagtcac agttcacaaa gctgtccttag tttctcttac aaacaggaga gagagagaga 1075
 gagagagaga gagagagaga gagagagaga gagagagaga g 1116

<210> 34
 <211> 321
 <212> PRT
 <213> Mus musculus

<400> 34

Met Asn Ser Lys Ala Ser Met Leu Gly Thr Asn Phe Thr Ile Ile His
 1 5 10 15

Pro Thr Val Phe Ile Leu Leu Gly Ile Pro Gly Leu Glu Gln Tyr His
 20 25 30

Thr Trp Leu Ser Ile Pro Phe Cys Leu Met Tyr Ile Ala Ala Val Leu
 35 40 45

Gly Asn Gly Ala Leu Ile Leu Val Val Leu Ser Glu Arg Thr Leu His
 50 55 60

Glu Pro Met Tyr Val Phe Leu Ser Met Leu Ala Gly Thr Asp Ile Leu
 65 70 75 80

Leu Ser Thr Thr Thr Val Pro Lys Thr Leu Ala Ile Phe Trp Phe His
 85 90 95

Ala Gly Glu Ile Pro Phe Asp Ala Cys Ile Ala Gln Met Phe Phe Ile
 100 105 110

His Val Ala Phe Val Ala Glu Ser Gly Ile Leu Leu Ala Met Ala Phe
 115 120 125

Asp Arg Tyr Val Ala Ile Cys Thr Pro Leu Arg Tyr Ser Ala Val Leu
 130 135 140

Thr Pro Met Ala Ile Gly Lys Met Thr Leu Ala Ile Trp Gly Arg Ser
 Page 100

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145              150              155              160
Ile Gly Thr Ile Phe Pro Ile Ile Phe Leu Leu Lys Arg Leu Ser Tyr
              165              170              175
Cys Arg Thr Asn Val Ile Pro His Ser Tyr Cys Glu His Ile Gly Val
              180              185              190
Ala Arg Leu Ala Cys Ala Asp Ile Thr Val Asn Ile Trp Tyr Gly Phe
              195              200              205
Ser Val Pro Met Ala Ser Val Leu Val Asp Val Ala Leu Ile Gly Ile
              210              215              220
Ser Tyr Thr Leu Ile Leu Gln Ala Val Phe Arg Leu Pro Ser Gln Asp
              225              230              235              240
Ala Arg His Lys Ala Leu Asn Thr Cys Gly Ser His Ile Gly Val Ile
              245              250              255
Leu Leu Phe Phe Ile Pro Ser Phe Phe Thr Phe Leu Thr His Arg Phe
              260              265              270
Gly Lys Asn Ile Pro His His Val His Ile Leu Leu Ala Asn Leu Tyr
              275              280              285
Val Leu Val Pro Pro Met Leu Asn Pro Ile Ile Tyr Gly Ala Lys Thr
              290              295              300
Lys Gln Ile Arg Asp Ser Met Thr Arg Met Leu Ser Val Val Trp Lys
              305              310              315              320

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Ser

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<210> 35
<211> 1267
<212> DNA
<213> Mus musculus

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<300>
<308> AF121977
<309> 1999-04-25
<313> (1)..(1267)

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<220>
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<222> (108)..(108)
<223> n i s a, c, g, o r t

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AI012-seqlist-NationalEntry.txt

<220>

<221> CDS

<222> (172)..(1200)

<400> 35

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ctttcatgag gtaccacaca acagcatgtt cctgtacaca tgtaactacc t atg ttt 177
Met Phe
1

tgt cat tta tat aat gag aac aat atg caa gtg gca atc ctg gat tcc 225
Cys His Leu Tyr Asn Glu Asn Met Gln Val Ala Ile Leu Asp Ser
5 10 15

att cta ata cct tct tat ttt tct ttc ctg aca gag atg gag cct gga 273
Ile Leu Ile Pro Ser Tyr Phe Ser Phe Leu Thr Glu Met Glu Pro Gly
20 25 30

aac tac aca gtt gta aca gaa ttc att ctt tta ggg tta aca gat gat 321
Asn Tyr Thr Val Val Thr Glu Phe Ile Leu Leu Gly Leu Thr Asp Asp
35 40 50

att aca gtc agt gtc att tta ttt gtt atg ttt cta atc gtc tat tct 369
Ile Thr Val Ser Val Ile Leu Phe Val Met Phe Leu Ile Val Tyr Ser
55 60 65

gtt act tta atg ggt aac ttg aac ata att gtg cta atc aga acc agc 417
Val Thr Leu Met Gly Asn Leu Asn Ile Ile Val Leu Ile Arg Thr Ser
70 75 80

cct cag ctt cac acc ccc atg tac ctt ttc ctt agc cat ttg gcc ttt 465
Pro Gln Leu His Thr Pro Met Tyr Leu Phe Leu Ser His Leu Ala Phe
85 90 95

cta gac att ggg tac tcc agc tca gtt aca ccc atc atg ctg agg ggc 513
Leu Asp Ile Gly Tyr Ser Ser Ser Val Thr Pro Ile Met Leu Arg Gly
100 105 110

ttt ctc aga aag gga aca ttt atc cct gtg gct ggc tgt gtg gct caa 561
Phe Leu Arg Lys Gly Thr Phe Ile Pro Val Ala Gly Cys Val Ala Gln
115 120 125 130

ctc tgt att gtg gtg gca ttt ggg aca tct gaa tct ttc ttg cta gct 609
Leu Cys Ile Val Val Ala Phe Gly Thr Ser Glu Ser Phe Leu Leu Ala
135 140 145

tcc atg gcc tat gac cgc tat gtg gcc atc tgc tca cct ttg ctc tac 657
Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Ser Pro Leu Leu Tyr
150 155 160

tca aca cag atg tcc tcc aca gtc tgc atc ctc cta gtt gga act tcc 705
Ser Thr Gln Met Ser Ser Thr Val Cys Ile Leu Leu Val Gly Thr Ser
165 170 175

tac cta ggt gga tgg gtg aat gct tgg ata ttt act ggt tgc tcc tta 753
Tyr Leu Gly Gly Trp Val Asn Ala Trp Ile Phe Thr Gly Cys Ser Leu
180 185 190

aat ctg tca ttt tgt ggg cca aat aaa att aat cac ttt ttc tgt gac 801
Asn Leu Ser Phe Cys Gly Pro Asn Lys Ile Asn His Phe Phe Cys Asp
Page 102

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195	200	205	210	
tat tca cca cta ttg aag ctt tct tgt tct cat gac ttt tct ttt gaa				849
Tyr Ser Pro Leu Leu Lys Leu Ser Cys Ser His Asp Phe Ser Phe Glu	215	220	225	
gtc att cca gca atc tct tcg gga tcc atc att gtg gtc act gtg ttt				897
Val Ile Pro Ala Ile Ser Ser Gly Ser Ile Ile Val Val Thr Val Phe	230	235	240	
atc att gct ctg tct tat gtc tac atc ctt gtg tca atc ctg aag atg				945
Ile Ile Ala Leu Ser Tyr Val Tyr Ile Leu Val Ser Ile Leu Lys Met	245	250	255	
cgc tct act gaa ggt cgc cag aag gcc ttc tcc acc tgc act tcc cac				993
Arg Ser Thr Glu Gly Arg Gln Lys Ala Phe Ser Thr Cys Thr Ser His	260	265	270	
ctc act gca gtc act ctg ttc ttt ggg acc atc aca ttc att tat gtg				1041
Leu Thr Ala Val Thr Leu Phe Phe Gly Thr Ile Thr Phe Ile Tyr Val	275	280	285	290
atg ccc cag tcc agc tac tcc aca gac cag aac aaa gtg gtg tct gtg				1089
Met Pro Gln Ser Ser Tyr Ser Thr Asp Gln Asn Lys Val Val Ser Val	295	300	305	
ttt tac aca gtg gtg atc ccc atg ttg aat ccc ctc atc tac agt ttc				1137
Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu Ile Tyr Ser Phe	310	315	320	
aga aac aaa gag gtt aaa gaa gcc atg aaa aaa ctg att gct aaa aca				1185
Arg Asn Lys Glu Val Lys Glu Ala Met Lys Lys Leu Ile Ala Lys Thr	325	330	335	
cat tgg tgg tcc tga aatatttgaa tttaaaaca gtaaattctg ctcttacagg				1240
His Trp Trp Ser	340			
taaatggcag tataactaagt aaattac				1267

<210> 36
 <211> 342
 <212> PRT
 <213> Mus musculus

<400> 36

Met Phe Cys His Leu Tyr Asn Glu Asn Asn Met Gln Val Ala Ile Leu
 1 5 10 15

Asp Ser Ile Leu Ile Pro Ser Tyr Phe Ser Phe Leu Thr Glu Met Glu
 20 25 30

Pro Gly Asn Tyr Thr Val Val Thr Glu Phe Ile Leu Leu Gly Leu Thr
 35 40 45

Asp Asp Ile Thr Val Ser Val Ile Leu Phe Val Met Phe Leu Ile Val
 50 55 60

AI012-seqlist-NationalEntry.txt

Tyr Ser Val Thr Leu Met Gly Asn Leu Asn Ile Ile Val Leu Ile Arg
65 70 75 80

Thr Ser Pro Gln Leu His Thr Pro Met Tyr Leu Phe Leu Ser His Leu
85 90 95

Ala Phe Leu Asp Ile Gly Tyr Ser Ser Ser Val Thr Pro Ile Met Leu
100 105 110

Arg Gly Phe Leu Arg Lys Gly Thr Phe Ile Pro Val Ala Gly Cys Val
115 120 125

Ala Gln Leu Cys Ile Val Val Ala Phe Gly Thr Ser Glu Ser Phe Leu
130 135 140

Leu Ala Ser Met Ala Tyr Asp Arg Tyr Val Ala Ile Cys Ser Pro Leu
145 150 155 160

Leu Tyr Ser Thr Gln Met Ser Ser Thr Val Cys Ile Leu Leu Val Gly
165 170 175

Thr Ser Tyr Leu Gly Gly Trp Val Asn Ala Trp Ile Phe Thr Gly Cys
180 185 190

Ser Leu Asn Leu Ser Phe Cys Gly Pro Asn Lys Ile Asn His Phe Phe
195 200 205

Cys Asp Tyr Ser Pro Leu Leu Lys Leu Ser Cys Ser His Asp Phe Ser
210 215 220

Phe Glu Val Ile Pro Ala Ile Ser Ser Gly Ser Ile Ile Val Val Thr
225 230 235 240

Val Phe Ile Ile Ala Leu Ser Tyr Val Tyr Ile Leu Val Ser Ile Leu
245 250 255

Lys Met Arg Ser Thr Glu Gly Arg Gln Lys Ala Phe Ser Thr Cys Thr
260 265 270

Ser His Leu Thr Ala Val Thr Leu Phe Phe Gly Thr Ile Thr Phe Ile
275 280 285

Tyr Val Met Pro Gln Ser Ser Tyr Ser Thr Asp Gln Asn Lys Val Val
290 295 300

Ser Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Pro Leu Ile Tyr
305 310 315 320

AI012-seq1ist-NationalEntry.txt

Ser Phe Arg Asn Lys Glu Val Lys Glu Ala Met Lys Lys Leu Ile Ala
325 330 335

Lys Thr His Trp Trp Ser
340

<210> 37
<211> 1120
<212> DNA
<213> Mus musculus

<300>
<308> AF121979
<309> 1999-04-25
<313> (1)..(1120)

<220>
<221> CDS
<222> (84)..(1040)

<220>
<221> misc_feature
<222> (940)..(940)
<223> n is a, c, g, or t

<220>
<221> misc_feature
<222> (1083)..(1083)
<223> n is a, c, g, or t

<400> 37
tgtcattatt agtgctgata aagtgttgtc aagtcctgtg agattccttc aaatgaatat 60

gtccatcaga ggctcctgac aac atg tca cca ggc aac agc tca tgg att cat 113
Met Ser Pro Gly Asn Ser Ser Trp Ile His
1 5 10

cct tct tcc ttc ctg ctc ttg gga atc cca gga ctg gaa gag ttg cag 161
Pro Ser Ser Phe Leu Leu Leu Gly Ile Pro Gly Leu Glu Glu Leu Gln
15 20 25

ttc tgg ctt ggt ttg cca ttt gga aca gtc tat ctt att gct gtc cta 209
Phe Trp Leu Gly Leu Pro Phe Gly Thr Val Tyr Leu Ile Ala Val Leu
30 35 40

ggg aat gtc atc att ctc ttt gta atc tat cta gag cac agc ctt cac 257
Gly Asn Val Ile Ile Leu Phe Val Ile Tyr Leu Glu His Ser Leu His
45 50 55

caa cct atg ttc tac tta ctg gcc ata ctg gct gtt act gac ttg ggt 305
Gln Pro Met Phe Tyr Leu Leu Ala Ile Leu Ala Val Thr Asp Leu Gly
60 65 70

ctg tct aca gca act gtt ccc aga gca ctc ggt ata ttc tgg ttt ggc 353
Leu Ser Thr Ala Thr Val Pro Arg Ala Leu Gly Ile Phe Trp Phe Gly
75 80 85 90

ttc cat aag att gcc ttt agg gac tgt gta gct caa atg ttt ttc ata 401
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Phe His Lys Ile Ala Phe Arg Asp Cys Val Ala Gln Met Phe Ile
95 100 105

tgntttgtaa gcttgcatac gtggaacaca ttacacaatg 1120

AI012-seqlist-NationalEntry.txt

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<211> 318
<212> PRT
<213> Mus musculus

<220>
<221> misc_feature
<222> (286)..(286)
<223> The 'xaa' at location 286 stands for Gln, Arg, Pro, or Leu.

<400> 38

Met Ser Pro Gly Asn Ser Ser Trp Ile His Pro Ser Ser Phe Leu Leu
1          5          10          15

Leu Gly Ile Pro Gly Leu Glu Glu Leu Gln Phe Trp Leu Gly Leu Pro
20          25          30

Phe Gly Thr Val Tyr Leu Ile Ala Val Leu Gly Asn Val Ile Ile Leu
35          40          45

Phe Val Ile Tyr Leu Glu His Ser Leu His Gln Pro Met Phe Tyr Leu
50          55          60

Leu Ala Ile Leu Ala Val Thr Asp Leu Gly Leu Ser Thr Ala Thr Val
65          70          75          80

Pro Arg Ala Leu Gly Ile Phe Trp Phe Gly Phe His Lys Ile Ala Phe
85          90          95

Arg Asp Cys Val Ala Gln Met Phe Phe Ile His Leu Phe Thr Gly Ile
100         105         110

Glu Thr Phe Met Leu Val Ala Met Ala Phe Asp Arg Tyr Ile Ala Ile
115         120         125

Cys Asn Pro Leu Arg Tyr Asn Thr Ile Leu Thr Asn Arg Thr Ile Cys
130         135         140

Ile Ile Val Gly Val Gly Leu Phe Lys Asn Phe Ile Leu Val Phe Pro
145         150         155         160

Leu Ile Phe Leu Ile Leu Arg Leu Ser Phe Cys Gly His Asn Ile Ile
165         170         175

Pro His Thr Tyr Cys Glu His Met Gly Ile Ala Arg Leu Ala Cys Val
180         185         190

Ser Ile Lys Val Asn Val Leu Phe Gly Leu Ile Leu Ile Ser Met Ile
195         200         205

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AI012-seqlist-NationalEntry.txt

Leu Leu Asp Val Val Leu Ser Ala Leu Ser Tyr Ala Lys Ile Leu His
210 215 220

Ala Val Phe Lys Leu Pro Ser Trp Glu Ala Arg Leu Lys Ala Leu Asn
225 230 235 240

Thr Cys Gly Ser His Val Cys Val Ile Leu Ala Phe Phe Thr Pro Ala
245 250 255

Phe Phe Ser Phe Leu Thr His Arg Phe Gly His Asn Ile Pro Arg Tyr
260 265 270

Ile His Ile Leu Leu Ala Asn Leu Tyr Val Ile Ile Pro Xaa Ala Leu
275 280 285

Asn Pro Ile Ile Tyr Gly Val Arg Thr Lys Gln Ile Gln Asp Arg Ala
290 295 300

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gcc gcc ctc gag cgg agc aag gcg att gag aaa aac ctc aaa gaa gat 101
Ala Ala Leu Glu Arg Ser Lys Ala Ile Glu Lys Asn Leu Lys Glu Asp
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ggc atc agc gcc gcc aaa gac gtg aaa tta ctc ctg ctg ggg gct gga 149
Gly Ile Ser Ala Ala Lys Asp Val Lys Leu Leu Leu Leu Gly Ala Gly
30 35 40
gaa tca gga aaa agc acc att gtg aag cag atg aag atc atc cat gaa 197
Glu Ser Gly Lys Ser Thr Ile Val Lys Gln Met Lys Ile Ile His Glu
45 50 55
gat ggc ttc tct ggg gaa gac gtg aag cag tac aag cct gtg gtc tac 245
Asp Gly Phe Ser Gly Glu Asp Val Lys Gln Tyr Lys Pro Val Val Tyr
60 65 70

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ttg Leu	ggc Gly	gtg Val	gag Glu	tat Tyr 95	ggg Gly	gac Asp	aag Lys	gag Glu	agg Arg 100	aag Lys	acg Thr	gac Asp	tcc Ser	aag Lys 105	atg Met	341
gtg Val	tgt Cys	gac Asp	gtg Val 110	gtg Val	agt Ser	cgt Arg	atg Met	gaa Glu 115	gac Asp	act Thr	gaa Glu	ccg Pro	ttc Phe 120	tct Ser	gca Ala	389
gaa Glu	ctt Leu	ctt Leu 125	tct Ser	gcc Ala	atg Met	atg Met	cga Arg 130	ctc Leu	tgg Trp	ggc Gly	gac Asp	tcg Ser 135	ggg Gly	atc Ile	cag Gln	437
gag Glu	tgc Cys 140	ttc Phe	aac Asn	cga Arg	tct Ser	cgg Arg 145	gag Glu	tat Tyr	cag Gln	ctc Leu	aat Asn 150	gac Asp	tct Ser	gcc Ala	aaa Lys	485
tac Tyr 155	tac Tyr	ctg Leu	gac Asp	agc Ser	ctg Leu 160	gat Asp	cgg Arg	att Ile	gga Gly	gcc Ala 165	ggg Gly	gac Asp	tac Tyr	cag Gln	ccc Pro 170	533
act Thr	gag Glu	cag Gln	gac Asp	atc Ile 175	ctc Leu	cga Arg	acc Thr	aga Arg	gtc Val 180	aaa Lys	aca Thr	act Thr	ggc Gly	atc Ile 185	gta Val	581
gaa Glu	acc Thr	cac His	ttc Phe 190	acc Thr	ttc Phe	aag Lys	aac Asn	ctc Leu 195	cac His	ttc Phe	agg Arg	ctg Leu	ttt Phe 200	gac Asp	gtc Val	629
ggg Gly	ggc Gly	cag Gln 205	cga Arg	tct Ser	gaa Glu	cgc Arg	aag Lys 210	aag Lys	tgg Trp	atc Ile	cac His	tgc Cys 215	ttt Phe	gag Glu	gat Asp	677
gtc Val 220	acg Thr	gcc Ala	atc Ile	atc Ile	ttc Phe	tgt Cys 225	gtc Val	gca Ala	ctc Leu	agc Ser	ggc Gly 230	tat Tyr	gac Asp	cag Gln	gtg Val	725
ctc Leu 235	cac His	gag Glu	gac Asp	gaa Glu	acc Thr 240	acg Thr	aac Asn	cgc Arg	atg Met	cac His 245	gaa Glu	tcc Ser	ctg Leu	aag Lys	ctc Leu 250	773
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ctg Leu	ttt Phe	ctc Leu	aac Asn 270	aag Lys	aag Lys	gac Asp	ata Ile	ttt Phe 275	gag Glu	gag Glu	aag Lys	atc Ile	aag Lys 280	aag Lys	tcc Ser	869
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gaa Glu 300	gct Ala	gtg Val	gct Ala	cac His	atc Ile	caa Gln 305	ggg Gly	cag Gln	tat Tyr	gag Glu	agt Ser 310	aag Lys	aat Asn	aag Lys	tca Ser	965
gct Ala 315	cac His	aag Lys	gaa Glu	gtc Val	tac Tyr 320	agc Ser	cat His	gtc Val	acc Thr	tgt Cys 325	gcc Ala	acg Thr	gac Asp	acc Thr	aac Asn 330	1013

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aac atc caa ttc gtc ttt gat gcc gtg aca gat gtc atc atc gcc aaa 1061
Asn Ile Gln Phe Val Phe Asp Ala Val Thr Asp Val Ile Ile Ala Lys
335 340 345

aac cta cgg ggc tgt gga ctc tac tga gccctggcct cctacccagc 1108
Asn Leu Arg Gly Cys Gly Leu Tyr
350

ctgccactca ctccctcccct ggacccagag ctctgtcact gctcagatgc cctgttaact 1168

gaagaaaacc tggaggctag ccttgggggc aggaggaggc atcctttgag catccccacc 1228

ccacccaact tcagcctcgt gacacgtggg aacagggttg ggcagagggtg tggaacagca 1288

caaggccaga gaccacggca tgccacttgg gtgctgtcct ctgggtcagct gtgtgtctta 1348

cacagaggcc gagtgggcaa cactgccatc tgattcagaa tgggcatgcc ctgtcctctg 1408

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agggctctgtt tggtagaggg tggtttcgtc gacaaaagcc aacatggaat caggccactt 1588

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cagtgccctg ctttactcca gccttgggtc ggaagtcgaa agcccttggg gtattcctgg 2068

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taagcaaaac ggcgtgggtg agctttggca accctagccc cagctaactt tggacagtca 2248

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<211> 354

<212> PRT

<213> Mus musculus

<400> 40

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Asp Val Lys Leu Leu Leu Leu Gly Ala Gly Glu Ser Gly Lys Ser Thr
35 40 45

Ile Val Lys Gln Met Lys Ile Ile His Glu Asp Gly Phe Ser Gly Glu
50 55 60

Asp Val Lys Gln Tyr Lys Pro Val Val Tyr Ser Asn Thr Ile Gln Ser
65 70 75 80

Leu Ala Ala Ile Val Arg Ala Met Asp Thr Leu Gly Val Glu Tyr Gly
85 90 95

Asp Lys Glu Arg Lys Thr Asp Ser Lys Met Val Cys Asp Val Val Ser
100 105 110

Arg Met Glu Asp Thr Glu Pro Phe Ser Ala Glu Leu Leu Ser Ala Met
115 120 125

Met Arg Leu Trp Gly Asp Ser Gly Ile Gln Glu Cys Phe Asn Arg Ser
130 135 140

Arg Glu Tyr Gln Leu Asn Asp Ser Ala Lys Tyr Tyr Leu Asp Ser Leu
145 150 155 160

Asp Arg Ile Gly Ala Gly Asp Tyr Gln Pro Thr Glu Gln Asp Ile Leu
165 170 175

Arg Thr Arg Val Lys Thr Thr Gly Ile Val Glu Thr His Phe Thr Phe
180 185 190

Lys Asn Leu His Phe Arg Leu Phe Asp Val Gly Gly Gln Arg Ser Glu
195 200 205

Arg Lys Lys Trp Ile His Cys Phe Glu Asp Val Thr Ala Ile Ile Phe
210 215 220

Cys Val Ala Leu Ser Gly Tyr Asp Gln Val Leu His Glu Asp Glu Thr
225 230 235 240

Thr Asn Arg Met His Glu Ser Leu Lys Leu Phe Asp Ser Ile Cys Asn
245 250 255

Asn Lys Trp Phe Thr Asp Thr Ser Ile Ile Leu Phe Leu Asn Lys Lys
260 265 270

AI012-seqlist-NationalEntry.txt

Asp Ile Phe Glu Glu Lys Ile Lys Lys Ser Pro Leu Thr Ile Cys Phe
 275 280 285

Pro Glu Tyr Thr Gly Pro Ser Ala Phe Thr Glu Ala Val Ala His Ile
 290 295 300

Gln Gly Gln Tyr Glu Ser Lys Asn Lys Ser Ala His Lys Glu Val Tyr
 305 310 315 320

Ser His Val Thr Cys Ala Thr Asp Thr Asn Asn Ile Gln Phe Val Phe
 325 330 335

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 340 345 350

Leu Tyr

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 <309> 1993-04-27
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 Gln Leu Arg Gln Glu Ala Glu Gln Leu Arg Asn Gln Ile Gln Asp Ala 10 15 20

cgg aag gcc tgc aac gat gcc acg ctg gtt cag atc acg tct aat atg 151
 Arg Lys Ala Cys Asn Asp Ala Thr Leu Val Gln Ile Thr Ser Asn Met 25 30 35

gac tcc gtg ggc cga ata caa atg cga aca agg cgc acg ctg cgt ggc 199
 Asp Ser Val Gly Arg Ile Gln Met Arg Thr Arg Arg Thr Leu Arg Gly 40 45 50

cac ctc gct aag atc tac gcc atg cac tgg gga tat gat tcc agg cta 247
 His Leu Ala Lys Ile Tyr Ala Met His Trp Gly Tyr Asp Ser Arg Leu 55 60 65

cta gtc agt gct tcg caa gat gga aaa tta att att tgg gat agc tat 295
 Leu Val Ser Ala Ser Gln Asp Gly Lys Leu Ile Ile Trp Asp Ser Tyr

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acc Thr	tgt Cys	gcc Ala	tac Tyr 105	gcc Ala	ccg Pro	tcc Ser	ggg Gly	aac Asn 110	tac Tyr	gtt Val	gcc Ala	tgt Cys	gga Gly 115	ggc Gly	ttg Leu	391
gat Asp	aac Asn	atc Ile 120	tgc Cys	tcc Ser	ata Ile	tac Tyr	aac Asn 125	cta Leu	aag Lys	acc Thr	cga Arg	gag Glu 130	gga Gly	gat Asp	gtg Val	439
cgg Arg	gtg Val 135	agc Ser	cga Arg	gaa Glu	ttg Leu	gca Ala 140	gga Gly	cac His	acg Thr	ggc Gly	tac Tyr 145	ttg Leu	tcc Ser	tgc Cys	tgc Cys	487
cga Arg 150	ttc Phe	tta Leu	gat Asp	gat Asp	gga Gly 155	caa Gln	atc Ile	att Ile	aca Thr	agt Ser 160	tcg Ser	gga Gly	gac Asp	acg Thr	act Thr 165	535
tgt Cys	gct Ala	ttg Leu	tgg Trp	gac Asp 170	att Ile	gag Glu	acc Thr	gga Gly	cag Gln 175	cag Gln	act Thr	acg Thr	acc Thr	ttc Phe 180	aca Thr	583
gga Gly	cac His	tcg Ser	ggt Gly 185	gac Asp	gtg Val	atg Met	agc Ser	ctc Leu 190	tca Ser	ctg Leu	agt Ser	cct Pro	gac Asp 195	ttg Leu	aag Lys	631
acg Thr	ttt Phe	gtg Val 200	tct Ser	ggt Gly	gct Ala	tgt Cys	gat Asp 205	gca Ala	tcc Ser	tca Ser	aag Lys	ctg Leu 210	tgg Trp	gat Asp	atc Ile	679
cga Arg	gat Asp 215	ggg Gly	atg Met	tgt Cys	aga Arg	cag Gln 220	tct Ser	ttc Phe	acc Thr	gga Gly	cac His 225	atc Ile	tca Ser	gac Asp	atc Ile	727
aac Asn 230	gct Ala	gtc Val	agt Ser	ttc Phe 235	ttc Phe	ccg Pro	agt Ser	gga Gly	tat Tyr	gcc Ala 240	ttt Phe	gcc Ala	act Thr	ggt Gly	tct Ser 245	775
gat Asp	gat Asp	gcc Ala	aca Thr	tgc Cys 250	cga Arg	ctc Leu	ttt Phe	gac Asp	ctc Leu 255	cgt Arg	gca Ala	gac Asp	cag Gln	gag Glu 260	ctc Leu	823
ctg Leu	cta Leu	tac Tyr	tct Ser 265	cat His	gac Asp	aat Asn	atc Ile	atc Ile 270	tgt Cys	ggc Gly	att Ile	act Thr	tct Ser 275	gtg Val	gcc Ala	871
ttc Phe	tca Ser	aag Lys 280	agt Ser	ggg Gly	cgc Arg	ctc Leu	ctg Leu 285	tta Leu	gcc Ala	ggc Gly	tat Tyr	gac Asp 290	gac Asp	ttc Phe	aac Asn	919
tgc Cys	agt Ser 295	gtg Val	tgg Trp	gac Asp	gct Ala	ctg Leu 300	aaa Lys	gga Gly	ggc Gly	cgg Arg	tca Ser 305	ggt Gly	gtc Val	ctt Leu	gct Ala	967
ggt Gly 310	cat His	gac Asp	aac Asn	cgt Arg	gtt Val 315	agc Ser	tgc Cys	tta Leu	ggt Gly	gtg Val 320	act Thr	gat Asp	gac Asp	ggc Gly	atg Met 325	1015
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AI012-seqlist-NationalEntry.txt

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tgaggaaaaa aa 1135

<210> 42
<211> 340
<212> PRT
<213> Mus musculus

<400> 42

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Ile Thr Ser Asn Met Asp Ser Val Gly Arg Ile Gln Met Arg Thr Arg
35 40 45

Arg Thr Leu Arg Gly His Leu Ala Lys Ile Tyr Ala Met His Trp Gly
50 55 60

Tyr Asp Ser Arg Leu Leu Val Ser Ala Ser Gln Asp Gly Lys Leu Ile
65 70 75 80

Ile Trp Asp Ser Tyr Thr Thr Asn Lys Met His Ala Ile Pro Leu Arg
85 90 95

Ser Ser Trp Val Met Thr Cys Ala Tyr Ala Pro Ser Gly Asn Tyr Val
100 105 110

Ala Cys Gly Gly Leu Asp Asn Ile Cys Ser Ile Tyr Asn Leu Lys Thr
115 120 125

Arg Glu Gly Asp Val Arg Val Ser Arg Glu Leu Ala Gly His Thr Gly
130 135 140

Tyr Leu Ser Cys Cys Arg Phe Leu Asp Asp Gly Gln Ile Ile Thr Ser
145 150 155 160

Ser Gly Asp Thr Thr Cys Ala Leu Trp Asp Ile Glu Thr Gly Gln Gln
165 170 175

Thr Thr Thr Phe Thr Gly His Ser Gly Asp Val Met Ser Leu Ser Leu
180 185 190

Ser Pro Asp Leu Lys Thr Phe Val Ser Gly Ala Cys Asp Ala Ser Ser
195 200 205

Lys Leu Trp Asp Ile Arg Asp Gly Met Cys Arg Gln Ser Phe Thr Gly
210 215 220

His Ile Ser Asp Ile Asn Ala Val Ser Phe Phe Pro Ser Gly Tyr Ala
225 230 235 240

Phe Ala Thr Gly Ser Asp Asp Ala Thr Cys Arg Leu Phe Asp Leu Arg
245 250 255

Ala Asp Gln Glu Leu Leu Leu Tyr Ser His Asp Asn Ile Ile Cys Gly
260 265 270

Ile Thr Ser Val Ala Phe Ser Lys Ser Gly Arg Leu Leu Leu Ala Gly
275 280 285

Tyr Asp Asp Phe Asn Cys Ser Val Trp Asp Ala Leu Lys Gly Gly Arg
290 295 300

Ser Gly Val Leu Ala Gly His Asp Asn Arg Val Ser Cys Leu Gly Val
305 310 315 320

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325 330 335

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<309> 1997-12-30
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Ser Asn Asn Ser Thr Thr Ser Ile Ser Gln Ala Arg Lys Ala Val Glu
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Gln Leu Lys Met Glu Ala Cys Met Asp Arg Val Lys Val Ser Gln Ala
25 30 35

gcc tca gac ctc ctg gcc tac tgt gaa gcc cac gtg cgg gag gac ccc 198
Ala Ser Asp Leu Leu Ala Tyr Cys Glu Ala His Val Arg Glu Asp Pro
40 45 50

ctc atc atc cca gtg cct gcc tca gaa aac ccc ttc cgg gag aag aag 246
Leu Ile Ile Pro Val Pro Ala Ser Glu Asn Pro Phe Arg Glu Lys Lys
55 60 65

ttc ttc tgc acc atc ctc taa cacccatggc gatgaagcgg gccctttcct 297
Phe Phe Cys Thr Ile Leu
70 75

gctgtaacag 307

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<212> PRT
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<400> 44

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1 5 10 15

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20 25 30

Lys Val Ser Gln Ala Ala Ser Asp Leu Leu Ala Tyr Cys Glu Ala His
35 40 45

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Phe Arg Glu Lys Lys Phe Phe Cys Thr Ile Leu
65 70 75

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<313> (1)..(2666)

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<400> 45

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cgacagggtca cctggacgcg agcctgtgtc cgggtctcgt cgttgccggc gcagtcactg	180
ggcacaaccg tgggactccg tctgtctcgg attaatcccg gagagccaga gccaacctct	240
cccggtcaga g atg cga ccc tca ggg acc gcg aga acc aca ctg ctg gtg	290
Met Arg Pro Ser Gly Thr Ala Arg Thr Thr Leu Leu Val	
1 5 10	
ttg ctg acc gcg ctc tgc gcc gca ggt ggg gcg ttg gag gaa aag aaa	338
Leu Leu Thr Ala Leu Cys Ala Ala Gly Gly Ala Leu Glu Glu Lys Lys	
15 20 25	
gtc tgc caa ggc aca agt aac agg ctc acc caa ctg ggc act ttt gaa	386
Val Cys Gln Gly Thr Ser Asn Arg Leu Thr Gln Leu Gly Thr Phe Glu	
30 35 40 45	
gac cac ttt ctg agc ctg cag agg atg tac aac aac tgt gaa gtg gtc	434
Asp His Phe Leu Ser Leu Gln Arg Met Tyr Asn Asn Cys Glu Val Val	
50 55 60	
ctt ggg aac ttg gaa att acc tat gtg caa agg aat tac gac ctt tcc	482
Leu Gly Asn Leu Glu Ile Thr Tyr Val Gln Arg Asn Tyr Asp Leu Ser	
65 70 75	
ttc tta aag acc atc cag gag gtg gcc ggc tat gtc ctc att gcc ctc	530
Phe Leu Lys Thr Ile Gln Glu Val Ala Gly Tyr Val Leu Ile Ala Leu	
80 85 90	
aac acc gtg gag aga atc cct ttg gag aac ctg cag atc atc agg gga	578
Asn Thr Val Glu Arg Ile Pro Leu Glu Asn Leu Gln Ile Ile Arg Gly	
95 100 105	
aat gct ctt tat gaa aac acc tat gcc tta gcc atc ctg tcc aac tat	626
Asn Ala Leu Tyr Glu Asn Thr Tyr Ala Leu Ala Ile Leu Ser Asn Tyr	
110 115 120 125	
ggg aca aac aga act ggg ctt agg gaa ctg ccc atg cgg aac tta cag	674
Gly Thr Asn Arg Thr Gly Leu Arg Glu Leu Pro Met Arg Asn Leu Gln	
130 135 140	
gaa atc ctg att ggt gct gtg cga ttc agc aac aac ccc atc ctc tgc	722
Glu Ile Leu Ile Gly Ala Val Arg Phe Ser Asn Asn Pro Ile Leu Cys	
145 150 155	
aat atg gat act atc cag tgg agg gac atc gtc caa aac gtc ttt atg	770
Asn Met Asp Thr Ile Gln Trp Arg Asp Ile Val Gln Asn Val Phe Met	
160 165 170	
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Ser Asn Met Ser Met Asp Leu Gln Ser His Pro Ser Ser Cys Pro Lys	
175 180 185	
tgt gat cca agc tgt ccc aat gga agc tgc tgg gga gga gga gag gag	866
Cys Asp Pro Ser Cys Pro Asn Gly Ser Cys Trp Gly Gly Gly Glu Glu	
190 195 200 205	
aac tgc cag aaa ttg acc aaa atc atc tgt gcc cag caa tgt tcc cat	914
Asn Cys Gln Lys Leu Thr Lys Ile Ile Cys Ala Gln Gln Cys Ser His	
210 215 220	

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gcg	ggg	tgt	aca	ggg	ccc	cga	gag	agt	gac	tgt	ctg	gtc	tgc	caa	aag	1010
Ala	Gly	Cys	Thr	Gly	Pro	Arg	Glu	Ser	Asp	Cys	Leu	Val	Cys	Gln	Lys	
		240					245					250				
ttc	caa	gat	gag	gcc	aca	tgc	aaa	gac	acc	tgc	cca	cca	ctc	atg	ctg	1058
Phe	Gln	Asp	Glu	Ala	Thr	Cys	Lys	Asp	Thr	Cys	Pro	Pro	Leu	Met	Leu	
	255					260					265					
tac	aac	ccc	acc	acc	tat	cag	atg	gat	gtc	aac	cct	gaa	ggg	aag	tac	1106
Tyr	Asn	Pro	Thr	Thr	Tyr	Gln	Met	Asp	Val	Asn	Pro	Glu	Gly	Lys	Tyr	
					275					280					285	
agc	ttt	ggt	gcc	acc	tgt	gtg	aag	aag	tgc	ccc	cga	aac	tac	gtg	gtg	1154
Ser	Phe	Gly	Ala	Thr	Cys	Val	Lys	Lys	Cys	Pro	Arg	Asn	Tyr	Val	Val	
				290					295					300		
aca	gat	cat	ggc	tca	tgt	gtc	cga	gcc	tgt	ggg	cct	gac	tac	tac	gaa	1202
Thr	Asp	His	Gly	Ser	Cys	Val	Arg	Ala	Cys	Gly	Pro	Asp	Tyr	Tyr	Glu	
			305					310					315			
gtg	gaa	gaa	gat	ggc	atc	cgc	aag	tgt	aaa	aaa	tgt	gat	ggg	ccc	tgt	1250
Val	Glu	Glu	Asp	Gly	Ile	Arg	Lys	Cys	Lys	Lys	Cys	Asp	Gly	Pro	Cys	
		320					325					330				
cgc	aaa	gtt	tgt	aat	ggc	ata	ggc	att	ggt	gaa	ttt	aaa	gac	aca	ctc	1298
Arg	Lys	Val	Cys	Asn	Gly	Ile	Gly	Ile	Gly	Glu	Phe	Lys	Asp	Thr	Leu	
	335					340					345					
tcc	ata	aat	gct	aca	aac	atc	aaa	cac	ttc	aaa	tac	tgc	act	gcc	atc	1346
Ser	Ile	Asn	Ala	Thr	Asn	Ile	Lys	His	Phe	Lys	Tyr	Cys	Thr	Ala	Ile	
					355					360					365	
agc	ggg	gac	ctt	cac	atc	ctg	cca	gtg	gcc	ttt	aag	ggg	gat	tct	ttc	1394
Ser	Gly	Asp	Leu	His	Ile	Leu	Pro	Val	Ala	Phe	Lys	Gly	Asp	Ser	Phe	
				370					375					380		
acg	cgc	act	cct	cct	cta	gac	cca	cga	gaa	cta	gaa	att	cta	aaa	acc	1442
Thr	Arg	Thr	Pro	Pro	Leu	Asp	Pro	Arg	Glu	Leu	Glu	Ile	Leu	Lys	Thr	
			385					390					395			
gta	aag	gaa	ata	aca	ggc	ttt	ttg	ctg	att	cag	gct	tgg	cct	gat	aac	1490
Val	Lys	Glu	Ile	Thr	Gly	Phe	Leu	Leu	Ile	Gln	Ala	Trp	Pro	Asp	Asn	
		400					405					410				
tgg	act	gac	ctc	cat	gct	ttc	gag	aac	cta	gaa	ata	ata	cgt	ggc	aga	1538
Trp	Thr	Asp	Leu	His	Ala	Phe	Glu	Asn	Leu	Glu	Ile	Ile	Arg	Gly	Arg	
		415				420					425					
aca	aag	caa	cat	ggt	cag	ttt	tct	ttg	gcg	gtc	gtt	ggc	ctg	aac	atc	1586
Thr	Lys	Gln	His	Gly	Gln	Phe	Ser	Leu	Ala	Val	Val	Gly	Leu	Asn	Ile	
					435					440					445	
aca	tca	ctg	ggg	ctg	cgt	tcc	ctc	aag	gag	atc	agt	gat	ggg	gat	gtg	1634
Thr	Ser	Leu	Gly	Leu	Arg	Ser	Leu	Lys	Glu	Ile	Ser	Asp	Gly	Asp	Val	
				450					455					460		
atc	att	tct	gga	aac	cga	aat	ttg	tgc	tac	gca	aac	aca	ata	aac	tgg	1682
Ile	Ile	Ser	Gly	Asn	Arg	Asn	Leu	Cys	Tyr	Ala	Asn	Thr	Ile	Asn	Trp	

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465	470	475	
aaa aaa ctc ttc ggg aca ccc aat cag aaa acc aaa atc atg aac aac			1730
Lys Lys Leu Phe Gly Thr Pro Asn Gln Lys Thr Lys Ile Met Asn Asn			
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aga gct gag aaa gac tgc aag gcc gtg aac cac gtc tgc aat cct tta			1778
Arg Ala Glu Lys Asp Cys Lys Ala Val Asn His Val Cys Asn Pro Leu			
495	500	505	
tgc tcc tcg gaa ggc tgc tgg ggc cct gag ccc agg gac tgt gtc tcc			1826
Cys Ser Ser Glu Gly Cys Trp Gly Pro Glu Pro Arg Asp Cys Val Ser			
510	515	520	525
tgc cag aat gtg agc aga ggc agg gag tgc gtg gag aaa tgc aac atc			1874
Cys Gln Asn Val Ser Arg Gly Arg Glu Cys Val Glu Lys Cys Asn Ile			
530	535	540	
ctg gag ggg gaa cca agg gag ttt gtg gaa aat tct gaa tgc atc cag			1922
Leu Glu Gly Glu Pro Arg Glu Phe Val Glu Asn Ser Glu Cys Ile Gln			
545	550	555	
tgc cat cca gaa tgt ctg ccc cag gcc atg aac atc acc tgt aca ggc			1970
Cys His Pro Glu Cys Leu Pro Gln Ala Met Asn Ile Thr Cys Thr Gly			
560	565	570	
agg gga cca gac aac tgc atc cag tgt gcc cac tac att gat ggc cca			2018
Arg Gly Pro Asp Asn Cys Ile Gln Cys Ala His Tyr Ile Asp Gly Pro			
575	580	585	
cac tgt gtc aag acc tgc cca gct ggc atc atg gga gag aac aac act			2066
His Cys Val Lys Thr Cys Pro Ala Gly Ile Met Gly Glu Asn Asn Thr			
590	595	600	605
ctg gtc tgg aag tat gca gat gcc aat aat gtc tgc cac cta tgc cac			2114
Leu Val Trp Lys Tyr Ala Asp Ala Asn Asn Val Cys His Leu Cys His			
610	615	620	
gcc aac tgt acc tat gga tgt gct ggg cca ggt ctt caa gga tgt gaa			2162
Ala Asn Cys Thr Tyr Gly Cys Ala Gly Pro Gly Leu Gln Gly Cys Glu			
625	630	635	
gtg tgg cca tct ggg tac gtt caa tgg cag tgg atc tta aag acc ttt			2210
Val Trp Pro Ser Gly Tyr Val Gln Trp Gln Trp Ile Leu Lys Thr Phe			
640	645	650	
tgg atc taa gaccagaagc catctctgac tcccctctca ccttccagtt			2259
Trp Ile			655
tcttccaaat cctctgggcc agccagaggt ctgagattct gccctcttgc cctgtgccca			2319
ccttggtgac cactggacag catatgtgat ggctactgct agtgccagct tcacaagagg			2379
ttaacactac ggactagcca ttcttcttat gtatctgttt ctgcaaatac agccgcttta			2439
cttaagtctc agcacttctt agtctcctct tttcctctca gtagcccaag gggatcatgtc			2499
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2666

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 <211> 655
 <212> PRT
 <213> Mus musculus

<400> 46

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Ala Leu Cys Ala Ala Gly Gly Ala Leu Glu Glu Lys Lys Val Cys Gln
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Gly Thr Ser Asn Arg Leu Thr Gln Leu Gly Thr Phe Glu Asp His Phe
 35 40 45

Leu Ser Leu Gln Arg Met Tyr Asn Asn Cys Glu Val Val Leu Gly Asn
 50 55 60

Leu Glu Ile Thr Tyr Val Gln Arg Asn Tyr Asp Leu Ser Phe Leu Lys
 65 70 75 80

Thr Ile Gln Glu Val Ala Gly Tyr Val Leu Ile Ala Leu Asn Thr Val
 85 90 95

Glu Arg Ile Pro Leu Glu Asn Leu Gln Ile Ile Arg Gly Asn Ala Leu
 100 105 110

Tyr Glu Asn Thr Tyr Ala Leu Ala Ile Leu Ser Asn Tyr Gly Thr Asn
 115 120 125

Arg Thr Gly Leu Arg Glu Leu Pro Met Arg Asn Leu Gln Glu Ile Leu
 130 135 140

Ile Gly Ala Val Arg Phe Ser Asn Asn Pro Ile Leu Cys Asn Met Asp
 145 150 155 160

Thr Ile Gln Trp Arg Asp Ile Val Gln Asn Val Phe Met Ser Asn Met
 165 170 175

Ser Met Asp Leu Gln Ser His Pro Ser Ser Cys Pro Lys Cys Asp Pro
 180 185 190

Ser Cys Pro Asn Gly Ser Cys Trp Gly Gly Gly Glu Glu Asn Cys Gln
 195 200 205

Lys Leu Thr Lys Ile Ile Cys Ala Gln Gln Cys Ser His Arg Cys Arg
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215

220

Gly Arg Ser Pro Ser Asp Cys Cys His Asn Gln Cys Ala Ala Gly Cys
 225 230 235 240

Thr Gly Pro Arg Glu Ser Asp Cys Leu Val Cys Gln Lys Phe Gln Asp
 245 250 255

Glu Ala Thr Cys Lys Asp Thr Cys Pro Pro Leu Met Leu Tyr Asn Pro
 260 265 270

Thr Thr Tyr Gln Met Asp Val Asn Pro Glu Gly Lys Tyr Ser Phe Gly
 275 280 285

Ala Thr Cys Val Lys Lys Cys Pro Arg Asn Tyr Val Val Thr Asp His
 290 295 300

Gly Ser Cys Val Arg Ala Cys Gly Pro Asp Tyr Tyr Glu Val Glu Glu
 305 310 315 320

Asp Gly Ile Arg Lys Cys Lys Lys Cys Asp Gly Pro Cys Arg Lys Val
 325 330 335

Cys Asn Gly Ile Gly Ile Gly Glu Phe Lys Asp Thr Leu Ser Ile Asn
 340 345 350

Ala Thr Asn Ile Lys His Phe Lys Tyr Cys Thr Ala Ile Ser Gly Asp
 355 360 365

Leu His Ile Leu Pro Val Ala Phe Lys Gly Asp Ser Phe Thr Arg Thr
 370 375 380

Pro Pro Leu Asp Pro Arg Glu Leu Glu Ile Leu Lys Thr Val Lys Glu
 385 390 395 400

Ile Thr Gly Phe Leu Leu Ile Gln Ala Trp Pro Asp Asn Trp Thr Asp
 405 410 415

Leu His Ala Phe Glu Asn Leu Glu Ile Ile Arg Gly Arg Thr Lys Gln
 420 425 430

His Gly Gln Phe Ser Leu Ala Val Val Gly Leu Asn Ile Thr Ser Leu
 435 440 445

Gly Leu Arg Ser Leu Lys Glu Ile Ser Asp Gly Asp Val Ile Ile Ser
 450 455 460

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Gly Asn Arg Asn Leu Cys Tyr Ala Asn Thr Ile Asn Trp Lys Lys Leu
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Phe Gly Thr Pro Asn Gln Lys Thr Lys Ile Met Asn Asn Arg Ala Glu
485 490 495

Lys Asp Cys Lys Ala Val Asn His Val Cys Asn Pro Leu Cys Ser Ser
500 505 510

Glu Gly Cys Trp Gly Pro Glu Pro Arg Asp Cys Val Ser Cys Gln Asn
515 520 525

Val Ser Arg Gly Arg Glu Cys Val Glu Lys Cys Asn Ile Leu Glu Gly
530 535 540

Glu Pro Arg Glu Phe Val Glu Asn Ser Glu Cys Ile Gln Cys His Pro
545 550 555 560

Glu Cys Leu Pro Gln Ala Met Asn Ile Thr Cys Thr Gly Arg Gly Pro
565 570 575

Asp Asn Cys Ile Gln Cys Ala His Tyr Ile Asp Gly Pro His Cys Val
580 585 590

Lys Thr Cys Pro Ala Gly Ile Met Gly Glu Asn Asn Thr Leu Val Trp
595 600 605

Lys Tyr Ala Asp Ala Asn Asn Val Cys His Leu Cys His Ala Asn Cys
610 615 620

Thr Tyr Gly Cys Ala Gly Pro Gly Leu Gln Gly Cys Glu Val Trp Pro
625 630 635 640

Ser Gly Tyr Val Gln Trp Gln Trp Ile Leu Lys Thr Phe Trp Ile
645 650 655